

# Psoriasis Oproject

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**Evidence-Based Dermatology** Hywel Williams 2009-01-22 Evidence-based Dermatology, Second Edition is a unique book in the field of clinical dermatology. Written and edited by some of the world's leading experts in evidence-based dermatology, it takes a highly evidence-based approach to the treatment of all major and many of the less common skin conditions. The toolbox at the beginning of the book explaining how to critically appraise different studies, along with the comprehensive reviewing and appraisal of evidence in the clinical chapters make this book distinctive in its field as do the treatment recommendations which are based on the discussion of the best available evidence using a question-driven approach and a common structure on dealing with efficacy, drawbacks and implications for clinical practice.

Genetic and Environmental Risk Factors for Psoriatic Arthritis Among Patients with Psoriasis Lihi Eder 2011

**Aim:** Most of the patients with Psoriatic Arthritis (PsA) develop arthritis following the onset of psoriasis. The aim of the project is to identify genetic and environmental risk factors for PsA among psoriasis patients. **Methods:** PsA and psoriasis patients from two prospective cohorts were analyzed. The incidence of PsA among a prospective cohort of psoriasis patients was assessed. The distribution of Human Leukocyte Antigen (HLA) alleles and Killer Cell Immunoglobulin like Receptors (KIRs) and their combinations was compared between PsA, psoriasis and healthy controls. In addition, the association between a wide range of environmental exposures and PsA was evaluated by comparing the frequencies of exposed individuals among patients with recent onset PsA and psoriasis. The association between smoking and PsA was further investigated. The prevalence of smoking was in PsA, psoriasis and the general population. The interaction between HLA-C\*06 and smoking was also tested. **Results:** The genetic analysis revealed several HLA-B alleles and HLA haplotypes that are associated with PsA compared to psoriasis and can potentially serve as independent markers for PsA. Furthermore, several combinations of KIR genes and their respective HLA ligands were also found to be associated with PsA compared to psoriasis. The incidence of PsA among psoriasis patients was found to be higher than previously reported and its rate was constant over time. HLA-C\*06 was associated with increased interval between psoriasis onset and PsA. Several environmental factors including occupational exposures, infections, injuries and smoking were associated with development of PsA. The prevalence of smoking was decreased among PsA patients compared to psoriasis. The interaction between HLA-C\*06 and smoking was found to be significant. **Conclusions:** Genetic and environmental factors are associated with the development of PsA in patients with psoriasis. These factors may serve as specific markers to identify psoriasis patients at increased risk for PsA.

**Health Care Issues in the Canadian North** David E. Young 1988 Collection of papers resulting from a workshop at the Knowing the North Conference which explore the rapidly-changing status of alternative medicine in

Canada, new development in the evolving relationship between alternative medicine and the orthodox medical establishment, and changes occurring in health care delivery strategies in the North. Special attention is paid to the practice and efficacy of Native Indian medicine.

*Imaging Through a Scanner, Darkly* Jack Denis O'Sullivan 2012 Breast cancer is the single most prevalent form of cancer in the UK today, accounting for around 16% of all diagnoses, and around 31% of diagnoses in women. The survival rates are good, however the prognosis is heavily dependent on the stage to which the cancer has progressed at diagnosis. In order to help accurately determine this stage, the sentinel lymph node of patients undergoing tumour resection surgery is removed and examined cytologically for the presence of cancerous cells. This examination of the lymph node is currently the rate-limiting step in the operation as a whole. There is evidence in the literature to suggest that cancerous tissue has a measurably different infrared spectrum from healthy tissue owing to chemical and morphological differences in the tissue. There is further evidence to suggest that in the visible and near infrared region, the spectra of healthy lymph node tissue is different from that of cancerous tissue. This thesis details a project, performed in collaboration with a surgical team at St Mary's Hospital, Newport, Isle of Wight, to analyse spectral images taken in the visible and near infrared, of biopsied lymph node tissue. In the course of the project, an unsupervised classification technique, based on an extension to the well established 'spectral angle', was developed to analyse the spectral images. Psoriasis affects 2-3% of the UK population causing itchy and/or painful plaques on the skin. One of the main treatments for psoriasis is UV phototherapy, exposure to which is a risk factor for burning and the development of cancers. This thesis details an investigation into the possibility of developing a targeted UV phototherapy system based on spectral imaging to delineate the plaques and a proposed new UV laser for treatment.

A Cree Healer and His Medicine Bundle David Young 2015-06-09 With the rise of urban living and the digital age, many North American healers are recognizing that traditional medicinal knowledge must be recorded before being lost with its elders. A Cree Healer and His Medicine Bundle is a historic document, including nearly 200 color photos and maps, in that it is the first in which a native healer has agreed to open his medicine bundle to share in writing his repertoire of herbal medicines and where they are found. Providing information on and photos of medicinal plants and where to harvest them, anthropologist David E. Young and botanist Robert D. Rogers chronicle the life, beliefs, and healing practices of Medicine Man Russell Willier in his native Alberta, Canada. Despite being criticized for sharing his knowledge, Willier later found support in other healers as they began to realize the danger that much of their traditional practices could die out with them. With Young and Rogers, Willier offers his practices here for future generations. At once a study and a guide, A Cree Healer and His Medicine Bundle

touches on how indigenous healing practices can be used to complement mainstream medicine, improve the treatment of chronic diseases, and lower the cost of healthcare. The authors discuss how mining, agriculture, and forestry are threatening the continued existence of valuable wild medicinal plants and the role of alternative healers in a modern health care system. Sure to be of interest to ethnobotanists, medicine hunters, naturopaths, complementary and alternative health practitioners, ethnologists, anthropologists, and academics, this book will also find an audience with those interested in indigenous cultures and traditions.

**Global Report on Psoriasis** World Health Organization 2016-02-15 This WHO Global report on psoriasis brings the public health impact of psoriasis into focus. The report is written to help raise awareness of the range of ways that psoriasis can affect peoples' lives. It intends to empower policy-makers with practical solutions to improve the health care and social inclusion of people living with psoriasis in their populations. The report highlights that much of the suffering caused by this common and complex disease can be avoided. Improving access to early diagnosis and appropriate treatment for psoriasis requires universally accessible health-care systems that provide people-centered care for patients with complex, lifelong conditions. Governments also have a key role to play in seeking to address the unnecessary social consequences of psoriasis by the challenging the myths and behaviors that lead to the exclusion of patients from healthcare settings and daily life.

#### **The Preformulation and Formulation Development for Transungual Delivery of Antifungal Drug Ciclopirox Olamine**

Biji Palliyil 2013 Onychomycosis also known as dermatophytic onychomycosis is the fungal infection of the toenails and fingernails, characterized by discoloration and thickening of the nail and involves the nail plate, nail bed and nail folds. The disease is more than a cosmetic problem, as it severely impacts the patient's quality of life. Onychomycosis is an opportunistic infection in special subpopulations of patients suffering from diabetes, psoriasis, HIV/AIDS etc. The current treatment strategies involve systemic delivery of oral antifungal agents including azoles (e.g. itraconazole) and allylamines (e.g. terbinafine hydrochloride) which are delivered to the nail plate from the nail bed. More recently, topical delivery of drugs including amorolfine and bifonazole/urea (available outside the United States) and Penlac® nail lacquer (ciclopirox) topical solution, 8%, available in the US are an alternative treatment option to the oral antifungal agents. Topical delivery of antifungal agents through the human nail offer several advantages over oral therapy including lower incidence of adverse events and lower potential for drug-drug interaction with drugs used to treat diabetes, HIV/AIDS and psoriasis. The objectives of this project were to: 1) To determine the critical factors affecting the delivery of ciclopirox olamine across the human nail, 2) To screen and select penetration enhancer(s) specific for ciclopirox olamine delivery into the target tissue(s) and 3) To develop a novel transungual formulation containing ciclopirox olamine (CPO) and penetration enhancer(s) for transungual delivery. Ciclopirox olamine, the salt form of the free acid of ciclopirox was used in the study to develop a novel transungual patch formulation and skin and nail permeation from the patch formulation was compared to Penlac® nail lacquer. Various factors such as drug partitioning into the healthy and infected toenail, drug-keratin binding, lateral diffusion, drug-epidermal binding and the formulation components, all play a role in achieving optimum drug penetration and permeation through the nail. Understanding the interplay of these factors helped in the development of an effective topical formulation which was observed to be

superior to Penlac® nail lacquer in the in vitro studies. Most cases of onychomycosis show infection and inflammation of the nail folds (skin surrounding the nails). Therefore for an efficient treatment of OM, the antifungal drugs must be delivered to two target tissues - human nail and the nail folds. The major challenges in developing a topical formulation for treatment on OM are: a) Achieving antifungal drug minimum inhibitory concentration (MIC) in the epidermis of the nail folds. b) Enhancing penetration and permeation of the antifungal drug across the human nail to reach the nail bed and achieve the necessary MIC (tissue underneath the nail). Twelve chemical penetration enhancers (PEs) were screened for their ability to enhance ciclopirox olamine accumulation into the nail folds and permeation through the nail. Propylene glycol (PG) enhanced the levels of the drug in the epidermis of the skin while limiting its permeation across the skin. Thiourea (TU) was selected as the best enhancer to increase ciclopirox olamine penetration into the nail. The diffusion of the antifungal drug across the human nail was studied in vitro using human cadaver toenails mounted in Franz diffusion cells. Pressure sensitive adhesives (PSA) belonging to the polyisobutylene, polysiloxane and polyacrylate classes of adhesives were screened to develop a monolithic drug-in-adhesive-type nail patch. The in vitro release of CPO from the PSA patches were limited and did not improve in presence of hydrophilic plasticizer (propylene glycol) and hydrophobic plasticizers (triacetin and triethyl citrate). Increasing the concentration of TU from 1 % to 10 %, lead to its crystallization in the dry patches. Therefore a change in the patch design was recommended. Other hydrophilic polymers including Polyoxyethylene (POLYOX®) and hydroxyl propyl methyl cellulose (HPMC) were also screened to develop a modified drug-in-hydrophilic matrix patch design. The patch was designed to incorporate CPO, PG and TU in the polymer matrix overlaid on a non-occlusive backing membrane cast with polyacrylate PSA. The HPMC films showed the best drug release profile with 80 % release in 2 to 4 hours using a USP apparatus 5. These patches were characterized for drug penetration into the skin and nail permeation. Penlac® nail lacquer was used as the comparator control product. The prototype HPMC K15M patch containing 10 %w/w each of the drug and TU and 150 % w/w of PG showed 2.8 fold increase in CPO accumulation in epidermis compared to Penlac® nail lacquer in 24 hours. The skin permeation was found to be similar to that of Penlac®. The HPMC K15M patch formulation showed 2.7 fold increase in CPO concentration within the nail and 4.2 fold increase in transungual flux compared to Penlac®. The patch delivered higher levels of ciclopirox olamine into the target tissues with a lower permeation lag-time. The novel nail patch delivery system had the following properties: a) Ease of application, b) Contact with the nail surface, c) Increased concentration of drug in dissolved form within the patch, d) Presence of enhancers. The novel nail patch formulation has shown increased efficiency in topical and transungual drug delivery for treatment of OM, when compared to the commercial formulation, Penlac® nail lacquer in the in vitro studies. The physical characterization of the patch using Scanning Electron Microscopy, Polarized Light Microscopy, Optical Light Microscopy, Differential Scanning Calorimetry, X-Ray Diffractometer and Fourier Transform Infrared Spectroscopy show that ciclopirox olamine exists at a sub-saturation level in a non-crystalline form in the patch without any significant drug-polymer interaction. In conclusion, all the objectives of the study were met by successfully selecting penetration enhancers for CPO delivery into the nail folds and across the nail plate, evaluating the interaction between CPO and target tissues, developing a transungual patch system and characterizing the novel

transungual patch.

**The Original Buddhist Psychology** Beth Jacobs, Ph.D.

2017-06-27 Drawing on decades of experience, a psychotherapist and Zen practitioner makes the Abhidharma--the original psychological system of Buddhism--accessible to a general audience for the first time. The Abhidharma, one of the three major text collections of the original Buddhist canon, explores the critical juncture of Buddhist thought and the therapeutic aspects of the religion and meditation. It frames the psychological system of Buddhism, explaining the workings of reality and the nature of the human mind. Composed of detailed matrixes and lists that outline the interaction of consciousness and reality, The Abhidharma explores the essence of perception and experience, and the reasons and methods behind mindfulness and meditation. Because of its complexity, the Abhidharma has traditionally been reserved only for academic or monastic study; now, for the first time, clinical psychologist Beth Jacobs makes this dynamic, important text and its teachings available to general readers, using practical explanation, personal stories, and vivid examples to gently untangle the technical aspects of the Abhidharma. Jacobs' work illuminates this classic of Buddhist thought, highlighting the ways it can broaden and deepen our experience of the human psyche and offering profound insights into spiritual practice.

Heat Shock Proteins in Inflammatory Diseases Alexzander A. A. Asea 2021-11-19 The book Heat Shock Proteins in Inflammatory Diseases provides the most comprehensive highlight and insight of the expression, function and therapeutic activity of Heat Shock Proteins in inflammatory diseases including sepsis, psoriasis, neurodegenerative diseases, cancers, viral infection and autoimmune rheumatic diseases. Using an integrative approach, the contributors provide a synopsis of the most current updates on the state of HSP in inflammatory diseases. Key basic and clinical research laboratories from major universities, academic medical hospitals, biotechnology and pharmaceutical laboratories around the world have contributed chapters that review present research activity and importantly project the field into the future. The book is a must read for graduate students, medical students, basic science researchers and postdoctoral scholars in the fields of Cancer Biology, Oncology, Translational Medicine, Clinical Research, Biotechnology, Cell & Molecular Medicine, Pharmaceutical Scientists and Researchers involved in Drug Discovery.

**Epsom Salt** Chris Kancel 2016-08-26 Epsom Salt Is Here To Help You! Get to know the Magic Mineral, Epsom salt. Here, You'll read about what Epsom salt is, what the various applications of Epsom salt are and about its miraculous benefits. Plus, we will provide you with the 33 top Epsom salt recipes that are super easy to follow at home. Epsom salt or Magic mineral is a truly amazing substance, it was discovered long before people were very looking after their health and wellness, and has been known as a 'Magic Mineral' Ever since, you might be wondering why; Well, because Epsom salt is able to; Improve your physical condition Help you lose weight Improve the quality of your muscles and skin Support your personal health Improve your feeling of well being Fight various diseases and conditions Boost the growth of trees, flowers and your lawn Clean your house And much, much more..! Right here you can learn how to use this magic mineral in your day-to-day life! Grab a copy of the book for only \$2.99 and discover this all-round Magical substance can do for your health, skin and garden!

**Research Portfolio** Clodagh Mullan 2001

**Identification and Mapping of a CNV Associated with Psoriasis** Alvin Lone Chen 2011 My project involves looking at sequence variation among individuals. Recent

studies have shown that CNVs encompass a larger source of variation than SNPs, with 12% of the human genome thought to contain CNVs. CNVs are a form of structural variation, greater than 1kb, that is found in a variable number of copies in the human genome. The goal of my project is to accurately characterize and define a CNV that is implicated with hair type and disease susceptibility. We have thus far not seen an association between CNV with hair type among the hair morphogen genes tested so far including BMP6 and WNT3 in a small sample study. Psoriasis has a known genetic component that has been linked through Genome Wide Association Studies to a region on chromosome 6p21.3. Through previous studies, this region is composed of many genes with SNP markers that have been associated with psoriasis patients. Of these genes, we have thus far analyzed BDEF4, PSORS1C1, and CDSN. Buccal swabs from 28 psoriasis and 8 control patients were collected. Utilizing qPCR analysis we have observed no significant change in copy number from BDEF4 but a reproducible 2-fold reduction of an intronic region of PSORS1C1 in psoriasis patients. A closer look at this region revealed that it also contained an exon of CDSN on the reverse strand. Furthermore, analysis on the remaining portion of exon 2 of CDSN revealed a consistent decrease among afflicted patients with this copy number variant in 19 out of 28 psoriasis patients.

**Itch** E. Carstens 2014-02-25 Advances in itch research have elucidated differences between itch and pain but have also blurred the distinction between them. There is a long debate about how somatic sensations including touch, pain, itch, and temperature sensitivity are encoded by the nervous system. Research suggests that each sensory modality is processed along a fixed, direct-line communication system from the skin to the brain. Itch: Mechanisms and Treatment presents a timely update on all aspects of itch research and the clinical treatment of itch that accompanies many dermatological conditions including psoriasis, neuropathic itch, cutaneous t-cells lymphomas, and systemic diseases such as kidney and liver disease and cancer. Composed of contributions from distinguished researchers around the world, the book explores topics such as: Neuropathic itch Peripheral neuronal mechanism of itch The role of PAR-2 in neuroimmune communication and itch Mrgprs as itch receptors The role of interleukin-31 and oncostatin M in itch and neuroimmune communication Spinal coding of itch and pain Spinal microcircuits and the regulation of itch Examining new findings on cellular and molecular mechanisms, the book is a compendium of the most current research on itch, its prevalence in society, and the problems associated with treatment.

**Occasional Publication** 1988

**Ophthalmic Imaging** Christye Sisson 2017-12-06 Ophthalmic Imaging serves as a reference for the practicing ophthalmic imager. Ophthalmic imaging combines photography and diagnostic imaging to provide insight into not only the health of the eye, but also the health of the human body as a whole. Ophthalmic photographers are specialists in imaging through and in the human eye, one of the only parts of the body where the circulation and nervous system is visible non-invasively. With technical perspective as context, this book will provide instructional techniques as well as the background needed for problem solving in this exciting field. The book covers all aspects of contemporary ophthalmic imaging and provides image support to ophthalmologists and sub-specialties including retinal specialists, corneal specialists, neuro-ophthalmologists, and ocular oncologists. This text serves as a reference for the practicing ophthalmic imager, or to imagers just getting started in the field.

**Psoriasis--Advances in Research and Treatment: 2012 Edition** 2012-12-26 Psoriasis--Advances in Research and Treatment: 2012 Edition is a ScholarlyBrief™ that

delivers timely, authoritative, comprehensive, and specialized information about Psoriasis in a concise format. The editors have built Psoriasis—Advances in Research and Treatment: 2012 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Psoriasis in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Psoriasis—Advances in Research and Treatment: 2012 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

**Understanding Cell Heterogeneity in the Basal Layer of Human Epidermis** Christina Philippeos 2017 The Human Cell Atlas is an international initiative aiming at creating a comprehensive map of all cells in the human body. This project contributes to the Skin Atlas by attempting to resolve a population of interfollicular epidermal stem cells (IFE SCs), previously described as homogeneous. These cells are located in the basal layer of the epidermis, which is distinguished by high expression of  $\alpha 6$ -integrin. We used this marker to enrich keratinocytes from human skin for basal cells and perform single-cell RNA sequencing. We found three transcriptionally distinct populations of basal keratinocytes. Two of them expressed classic basal layer markers KRT5, KRT14. The differences between these stem cells were driven by genes associated with immunomodulatory function (CCL2, CXCL14, POSTN). The third population of basal keratinocytes was enriched in markers of early stem cell commitment (KRT10, DMKN). The three groups formed a continuous trajectory after pseudotime reconstruction, reflecting differentiation of IFE SCs. We used the same approach to address changes that IFE SCs undergo in psoriasis, an auto-immune disease characterized by skin inflammation and keratinocyte hyperproliferation. We found that basal cells from psoriatic epidermis also have two stem cell sub-populations and one group with the early differentiated signature. The latter was expanded from 8% in healthy skin to 33% in psoriasis. We were also able to identify sub-populations of stem cells that are specific to healthy and disease skin and found non-linear pseudotime trajectory of basal cells in psoriasis, suggesting a stem cell state switch in disease. In conclusion, the Skin Atlas is founding new insights in the epidermal stem cell compartment in healthy and diseased skin.

**Research Grants Index** National Institutes of Health (U.S.). Division of Research Grants 1974

**Moderate to Severe Psoriasis, Fourth Edition** John Y. M. Koo 2014-03-18 Written by experts in the dermatology field, this new fourth edition of Moderate-to-Severe Psoriasis discusses the current use of biologics and other pharmacologic and phototherapy treatments for moderate-to-severe psoriasis. Illustrated with high quality color figures, this standalone text emphasizes safe and effective treatments for the psoriasis patient that are perfect for the dermatologist in daily practice. New to this edition are chapters on day treatment programs, new agents, erythrodermic and pustular psoriasis, special populations, and pharmacogenetics.

**Biologics for Psoriasis in Iraq** Omar Al-Janabi 2012 Introduction of these drugs in treating patients with psoriasis in some of the hospitals in Baghdad will help those patients a lot, improving their quality of life and decreasing the morbidity caused by psoriasis and many of the conventional drugs used to treat it. They could be introduced for those for whom many of these

conventional drugs are ineffective or contraindicated as a result of their effects on different organs of the body. The aim of this project is to explore the feasibility and the possibility of the introduction of biological drugs as one of the treatment options for psoriasis in Alkarama teaching hospital in Baghdad. This project has many objectives. Firstly, to assess the readiness of hospitals in Baghdad for the introduction of biological drugs. Secondly, to try to establish the suitability of using biological drugs for psoriasis in Iraq. Thirdly, to decrease the cumulative side effects of conventional systemic antipsoriatic drugs by switching to biologics for a certain period of time as part of rotational therapy or combined therapy strategies.

**Use of Topical Co-drugs for the Treatment of Psoriasis**

Ankita Jadhav 2017 Psoriasis is a chronic autoimmune disease characterized by extensive epidermal keratinocyte proliferation and inflammation. In order to target the hyperproliferation and inflammation, our lab previously synthesized the co-drugs MTX IBU and MTX IBU from the parent compounds methotrexate MTX and ibuprofen IBU. The objective of this project was to formulate these co drugs into stable microemulsions ME for topical delivery to evaluate their hydrolytic stability in the ME formulations to monitor accumulation and hydrolysis in the skin.

**Development and Evaluation of a Product that Improves**

**the Quality of Life of Patients with Psoriasis** Laura Andrea Gómez León 2018 "Psoriasis is a chronic autoimmune disease that affects about 125 million people of all ages in the world. Manifesting mainly on the skin through plaques that are not contagious. However, due to their physical appearance, psoriasis patients tend to be rejected, for which they also face emotional consequences generated by this disease... By identifying this problem and the serious effects on self-esteem, the hydro-life project begins, with the aim of finding a solution to the social problems faced by this population in their daily lives. HIDROVIVA aims to improve the self-esteem of Colombians suffering from Psoriasis, by means of a dermatological product at home that improves the aesthetic appearance of the affected areas; while symptoms such as pain, itching, and dryness of this disease are relieved; giving the user the opportunity to empower themselves in their situation and in this way overcome the problems of self-esteem." -- Tomado del Formato de Documento de Grado.

**Characterizing Microemulsion Formulations and Their Stability for Topical Delivery of Prodrugs** Zaheen Nafi

Sala Uddin 2021 Psoriasis is a chronic and common disease of the skin that is characterized by epidermal hyperplasia, altered keratinocyte differentiation, dilated vasculature in the dermis, and infiltration of leukocytes into both the epidermal and dermal layers of the skin. This autoimmune disease involves the acceleration of the life cycle of skin cells (keratinocytes) resulting in inflammation and plaques. Therapies for treating psoriasis are aimed at suppressing hyperproliferation of keratinocytes and tempering the activation of the immune cells. Treatment modalities used for managing psoriasis involve single agents or combination therapies delivered topically to the skin or administered systemically. 5-Aminolevulinic acid (ALA) is a drug that is used in combination with light (referred to as photodynamic therapy, ALA-PDT) to suppress hyperproliferation of keratinocytes and reduce plaques in psoriatic skin. ALA is applied to the affected skin, however, due to its hydrophilic properties, absorption into the skin layers is limited. Prodrugs of ALA have been used to increase skin penetration. Mycophenolic acid (MPA) has also been used to suppress the immune response and inflammation in psoriatic skin. Our lab is interested in developing topical combination therapies for treating psoriasis to limit

hyperproliferation of skin cells and suppress inflammation using co-drugs derived from ALA and MPA. This thesis project is focused on developing topical microemulsion (ME) formulations for prodrugs and co-drugs of ALA. A model prodrug of ALA, aminolevulinic acid benzyl ester (ALA-BE) was used in these studies, with the eventual aim of using these developed formulations to deliver co-drugs of ALA and MPA to the skin. Our hypothesis is that ME formulations are suitable vehicles to efficiently deliver prodrugs and co-drugs of ALA to the viable layers of the skin. Our hypothesis was tested using two specific aims. In the first specific aim, a series of loaded and unloaded ME formulations were prepared and characterized for thermodynamic stability, particle size and polydispersity index. ME formulations were composed of isopropyl myristate (IPM) as the oil phase (O), a mixture of Tween 80, Span 80 and 1,2-octanediol (3:2:1.2) as surfactant blend (SB), and deionized water (H<sub>2</sub>O) as the aqueous phase with ratios ranging from (Oil: Surfactant Blend) 1:9 to 9:1 was prepared with the addition of different amounts of water following aqueous titration method. Among the stable ME (Oil: Surfactant Blend) 9:1, 8:2 and 3:7 ratios were selected to load with the ALA-BE prodrug. Each mixture was visually inspected for stability and categorized using the Winsor classification system. Pseudo ternary phase diagrams were prepared to characterize the ME compositions according to Winsor classification and provide more detail about series of interactions between the components in ME. Particle size measurement is critical before topical or transdermal delivery is attempted. The average particle size of stable microemulsion ALA-BE formulations was found to be in the range of 50-200 d.nm and formulations composed of 88.07, 45.6 and 29.7 d.nm average particle size were selected for skin permeation studies. Suitable mobile phases were tested for ALA-BE and isocratic mobile phase of methanol, deionized water and acetonitrile (6:3:1) was selected. HPLC conditions were identified, and a method was then developed for ALA-BE and its metabolic product benzyl alcohol (BzOH). The peak area corresponding to ALA-BE and BzOH was recorded and calibration curves for both were obtained using HPLC analysis at six different concentrations in the range of 1.0-50.0 µM. For specific aim 2, cutaneous penetration and stability of the model prodrug (ALABE) in selected ME formulation was determined. Accumulation of the formulated ALABE in MEs in the viable skin layers was assessed using frozen porcine skin specimens in Franz diffusion cell apparatus as the model. ALA-BE loaded preparation (O:SB of 8:2) with 88.07 d.nm particle size was selected and skin accumulation was assessed. Extraction solvent (Mobile phase) was used to extract ALA-BE and its metabolic products out of the skin compartments and accumulation in each compartment of skin was verified and quantified at 2, 4 and 8 hours using HPLC analysis. Results from the skin penetration studies with porcine skin demonstrated that ALA-BE accumulated in the viable layers with 9.90 % of ALA-BE formulation at 2 hours, and at 4 hours, 17.64% ALA-BE accumulated in SC whereas at 2 hours 1.22% and at 4 hours 1.26% penetrated in the ED layers of the skin. Complete hydrolysis of ALA-BE to ALA was observed in the ED layer suggesting that esterases in the viable ED layer of skin are likely responsible for hydrolysis of ALA-BE. Concentrations of ALA-BE and metabolite of ALA-BE, ALA and BzOH in the ED layer of the skin were approximately the same at all time points. Hydrolysis of the ALA-BE in these experiments was investigated by monitoring for BzOH in the skin layers. As ALA-BE is 100% hydrolyzed to ALA in the ED layer, thus these data show that ALA-BE with the right ME formulation is able to deliver an increasing amount of the active drug (ALA) to the ED layer. The experimental work performed and described for this thesis established that prodrug of ALA incorporated into stable ME

formulations can be used to topically deliver ALA to the viable layer of the skin to combat hyperproliferation of keratinocytes and other complications of psoriasis. The efficacy of this formulation along with the others formulated previously will be explored further to determine their use for a co-drug development of MPA or MTX with 5-ALA in the future.

**Self-help and Health in Europe** Stephen Hatch 1983 This book brings together 24 contributions (from 13 European countries) about the role of self-help in the overall pattern of health care, dealing with both the practical and the theoretical: (1) "A Reorientation of Health Care?" (Ilona Kickbusch and Stephen Hatch); (2) "Self-help Groups in Primary Health Care" (David Robinson); (3) "Self-care: What People Do for Themselves" (Kay Dean); (4) "The Diversity of Self-help Groups" (Ann Richardson); (5) "Groupes de Sante: The Users' Movement in France" (Alf Trojan); (6) "Self-help: A Psychoanalyst's Perspective" (Kurt Buchinger); (7) "Self-help and the Medical Practitioner" (Michael L. Moeller); (8) "Self-help and Medical Education" (M. Bremer Schulte); (9) "Health Education and Self-care in Lapland" (Bo Henricson); (10) "Researching Self-help: A Social Scientist's Perspective" (Jan Branckaerts); (11) "The Patient's Point of View" (Alec Dakin and Jennifer Milligan); (12) "Hypertension Clubs in Croatia" (Arpad Barath); (13) "Health Club Network Development in Southern Hungary" (I. Szilard, A. Ozsvath, and J. Tenyi); (14) "Self-help in the Soviet Union: The Case of the Deaf" (Madelaine Drake); (15) "The Belgian Huntington League" (Jan Branckaerts); (16) "A Women's Dispensary" (Christiane Viedma); (17) "Short-term and Long-term Effects of Lay Groups on Weight Reduction" (A Grimsom, G. Helgesen, and C. Borchgrevink); (18) "On Identification Resonance" (Arno van der Avort and Pieter van Harberden); (19) "Nottingham Self-Help Groups Project: The First Year's Work" (Judy Wilson); (20) "Health Enters Green Pastures: The Health Movement in the Federal Republic of Germany" (Ellis Huber); (21) "Self-help: A New Perspective for Health Care" (Robert Lafaille); (22) "Support for Self-help" (Bert Bakker and Mathieu Karel); (23) "Mutual Aid: From Research to Supportive Policy--Report from a WHO Workshop"; and (24) "Making a Place for Self-help" (Stephen Hatch and Ilona Kickbusch). (JD)

**Education for Health** 1984

**Prodrug Therapy for the Treatment of Psoriasis: Formulation, Stability and Drug Delivery to the Skin** Ritu S. Vadgama 2018 Psoriasis is a chronic autoimmune disease that is characterized by premature maturation and hyperproliferation of keratinocytes, and inflammation. Mycophenolic acid (MPA) is an immunosuppressant that targets inflammation through inhibition of inosine monophosphate dehydrogenase (IMPDH) and other mechanisms. 5-Aminolevulinic acid (5-ALA) is a drug used in photodynamic therapy and is cytostatic towards hyperproliferating keratinocytes. We have formulated MPA, 5-ALA and methyl ester prodrugs of MPA and 5-ALA, methyl mycophenolic acid (MPA-ME) and methyl 5-aminolevulinic acid (MAL) respectively, as model compounds to develop stable microemulsions (MEs) as vehicles for topical delivery. The eventual aim is to use these MEs to deliver co-drugs of MPA and 5-ALA to the skin as novel combination therapies to treat psoriasis. The specific aims of this project were to develop the MEs, characterize the formulations by particle size and viscosity, evaluate stability of the ME and the drugs in the ME formulations, to determine drug delivery into the viable skin layers and to monitor hydrolysis of the prodrugs in the skin. ME formulations composed of IPM as the oil phase, a mixture of Tween 80, Span 80 and 1,2-octanediol as surfactant blend, and deionized water (DI) as the aqueous phase were prepared and selected formulations were monitored for stability and characterized by particle size and viscosity.

Hydrolytic stability MPA-ME was monitored in the ME formulations by HPLC. Drug delivery of the formulated drugs in MEs into the viable skin layers was assessed using intact, porcine skin specimens and drug penetration was quantified at 2, 4, 8, 12 and 24 hours using HPLC analysis. Hydrolysis of MPA-ME the skin was also monitored and quantified. MEs used for formulating the drugs were composed of IPM as the oil phase (based solubility of the drugs) with low water content (1%) to minimize hydrolysis of prodrugs in the formulations. All of the drug-loaded ME formulations were physically stable for 24h, but ME formulations of MPA, 5-ALA and MAL phase separated, or drug precipitated from the formulation after 1 week. The MPA-ME formulation was physically stable for 1 week and no evidence of hydrolysis of the ester in the formulation was detected. The range of average particle sizes of drug-loaded ME formulations (1%) was found to be 25.7-102.9 d.nm and the viscosities ranged from 3.65- 8.88 cP. Results from the skin penetration studies with porcine skin demonstrated that both MPA and MPA-ME penetrated into the viable layers of the skin. At 2h for 1% MPA formulation, 1.23% of drug penetrated in SC and 4.96% drug penetrated in the ED layers of the skin, as opposed to 12.41% in SC at 24h and 60.05% in ED at 24h. Complete hydrolysis of MPA-ME to MPA was observed in the ED after only 2h., suggesting that esterases in the skin are likely responsible for hydrolysis of the prodrug as the ester was hydrolytically stable in the formulation before application. Concentrations of MPA and MPA-ME in the ED layer of the skin was approximately the same at 2h-12h (37-227nmols/cm<sup>2</sup>, but at 24h, significantly more MPA-ME was detected in the ED layer (4.2 μmols) compared with MPA concentrations (1.04 μmols). MPA-ME is 100% hydrolyzed to MPA in the ED layer, thus these data show that the prodrug, formulated in ME-A, delivers more of the active drug (MPA) to the ED layer than the parent drug formulated in the same delivery vehicle. However, skin integrity was not assessed after 24h and the significant increase in drug concentrations at the 24h timepoint may be due to deteriorating barrier function of the skin. Overall, the drugs; MPA, 5-ALA and MAL; were successfully formulated as stable topical MEs and are stable for at least 24 hours. MPA-ME was stable for at least 1 week. No hydrolysis of the drugs was seen in the formulations. The drugs penetrated and accumulated into the skin layers in sufficient concentrations. The ester prodrug MPA-ME was hydrolyzed in the skin layers releasing the parent compound MPA possibly enabling it to exert its action. The efficacy of these formulations followed by their use for a co-drug development of MPA and 5-ALA will be explored in the future.

**Dermatological Atlas of Indigenous People** Marcos Cesar Florian 2017-09-07 Skin diseases are highly prevalent among indigenous people, leading to low mortality but greatly impacting their quality of life. Such diseases can be observed in indigenous people; both those living in isolated communities and those who have since been urbanized to some degree share a common characteristic of presenting different clinical patterns than non-indigenous individuals. These specificities necessitate a special approach when diagnosing dermatologic diseases in indigenous people. However, these considerations are rarely discussed in standard dermatology books. This Atlas addresses that gap by providing specific materials for professionals involved in the health of indigenous people, especially with those who live either alone or in remote areas. It offers a comprehensive overview of the most common skin diseases in specific tribes, providing a full clinical guide on the dermatologic signs and symptoms in these individuals. Additionally, the book complements the clinical standpoint with an anthropologic perspective, examining the impact of dermatologic diseases in indigenous people and the different meaning of these diseases in their lives. Most

of the material presented in this Atlas was collected in the Xingu Program, a project created in 1965 by the Federal University of São Paulo, Brazil, and devoted to providing medical care to indigenous people from the Upper Xingu region, in the heart of the Amazon rainforest. Thus, the content is primarily applicable to South American indigenous people. However, the common characteristics of the isolation and non-urbanization of these communities, as well as the anthropologic perspective adopted here, allow the content to be extrapolated to other indigenous peoples worldwide. This Atlas will be a novel and valuable resource for health professionals who work with indigenous peoples, especially in geographic areas where dermatologists are not always readily available.

**Dermatological Drug Development** Tomoko Maeda-Chubachi 2020-09-18 This book uniquely summarizes approaches to developing dermatological drugs in a regulated environment from the perspective of the pharmaceutical industry. It brings together the insights of skilled and experienced industry experts to reveal the complexities of dermatological drug development, covering topical, oral, and biologic drugs. This book fills an important gap, as there is currently no other textbook addressing dermatological drug development, explaining and illustrating why unique nonclinical and clinical studies are necessary and how they are typically designed and conducted. The drug development process is also an evolving strategy that is characterized by communicating, negotiating, and agreeing with regulatory agencies, such as FDA (US), EMA (EU), and PMDA (Japan). **Herbal Allies** Robert Rogers 2017-06-27 Twenty plants, including familiar trees like the aspen, birch, spruce, and poplar, as well as lesser-known plants like Labrador tea, cow parsnip, and buffalo berry, form the soul of herbalist Robert Rogers's medicine kit. Herbal Allies chronicles the journey that led Rogers to become an herbalist and shares his deep knowledge of the plants that shaped his practice. The author weaves personal experience, observations, knowledge from indigenous healers, and many years of expertise from his practice as a professional herbalist and clinical professor to present a unique and fascinating narrative that not only limns one man's vital connection to plants but also provides invaluable information on effectively using plant medicine for the prevention and treatment of a variety of health conditions.

**Dual Role of CARD14 in Skin Inflammatory Diseases** Alon Peled 2017 Atopic dermatitis (AD) is a highly prevalent chronic inflammatory skin disease that is known to be, at least in part, genetically determined. Mutations in caspase recruitment domain-containing protein 14 (CARD14) have been shown to result in various forms of psoriasis and pityriasis rubra pilaris. In this research project, we aimed to identify rare DNA variants conferring a significant risk for AD through genetic and functional studies in a cohort of patients affected with severe AD. Whole exome and direct gene sequencing revealed in 4 patients 2 rare heterozygous missense mutations in the gene encoding CARD14, a major regulator of nuclear factor  $\kappa$ B (NF- $\kappa$ B). A dual luciferase reporter assay demonstrated that both mutations exert a dominant loss-of-function effect and result in decreased NF- $\kappa$ B signaling. Accordingly, immunohistochemistry staining showed decreased expression of CARD14 in patients' skin, as well as decreased levels of activated p65, a surrogate marker for NF- $\kappa$ B activity. CARD14-deficient or mutant-expressing keratinocytes displayed abnormal secretion of key mediators of innate immunity. Interestingly, CARD14 expression was also found to be reduced in the skin of patients with sporadic atopic dermatitis. In conclusion, while dominant gain-of-function mutations in CARD14 are associated with psoriasis and related diseases, dominant loss-of-function mutations in the same gene are associated with

a severe variant of AD.

**Psoriasiform Eruptions During Kawasaki Disease (KD)**

Ellen S. Haddock 2017 A psoriasis-like eruption develops in a subset of patients with Kawasaki disease (KD).

**The Efficacy of 0.1% Tacrolimus Ointment Compared with Clobetasone Butyrate 0.05% Ointment in Patients with Facial, Flexural Or Genital Psoriasis**

Christine Elizabeth Kley 2009

**International Journal of Immunopathology and Pharmacology** 1997

Textbook of Clinical Trials David Machin 2007-01-11 Now published in its Second Edition, the Textbook of Clinical Trials offers detailed coverage of trial methodology in diverse areas of medicine in a single comprehensive volume. Praise for the First Edition: "... very useful as an introduction to clinical research, or for those planning specific studies within therapeutic or disease areas." BRITISH JOURNAL OF SURGERY, Vol. 92, No. 2, February 2005 The book's main concept is to describe the impact of clinical trials on the practice of medicine. It separates the information by therapeutic area because the impact of clinical trials, the problems encountered, and the numbers of trials in existence vary tremendously from specialty to specialty. The sections provide a background to the disease area and general clinical trial methodology before concentrating on particular problems experienced in that area. Specific examples are used throughout to address these issues. The Textbook of Clinical Trials, Second Edition: Highlights the various ways clinical trials have influenced the practice of medicine in many therapeutic areas Describes the challenges posed by those conducting clinical trials over a range of medical specialities and allied fields Additional therapeutic areas are included in this Second Edition to fill gaps in the First Edition as the number and complexity of trials increases in this rapidly developing area Newly covered or updated in the Second Edition: general surgery, plastic surgery, aesthetic surgery, palliative care, primary care, anaesthesia and pain, transfusion, wound healing, maternal and perinatal health, early termination, organ transplants, ophthalmology, epilepsy, infectious disease, neuro-oncology, adrenal, thyroid and urological cancers, as well as a chapter on the Cochrane network An invaluable resource for pharmaceutical companies, the Textbook of Clinical Trials, Second Edition appeals to those working in contract research organizations, medical departments and in the area of public health and health science alike.

**Evidence-Based Dermatology** Michael Bigby 2014-06-05 Be sure your skin-care treatments have strong

evidential support Evidence-based Dermatology, Third Edition takes a unique approach to clinical dermatology by emphasising use of only the highest quality available evidence when treating people with skin diseases.

Beginning with a toolbox introduction to the practice of evidence-based dermatology, it then covers the application of evidence for dermatological treatments across a wide range of ailments, including: • Common inflammatory skin diseases • Skin cancer, moles and actinic keratoses • Infective skin disease, exanthems and infestations • Disorders of pigmentation In addition, many of the rarer skin disorders are also included so as to provide comprehensive coverage of the topic. World-leading experts in dermatology follow a clinical approach for each disease, and as well as providing their expert guidance on the description and diagnosis of dermatologic disorders, they also discuss common dilemmas that clinicians face when considering the best approach to patient management. 'Key Points' accompany each chapter to provide a quick review of the most important points. Clinically oriented and practically focused, Evidence-based Dermatology ensures that your treatments are entirely patient-focused and fully supported by the very latest medical evidence.

Characterisation of Rare Genetic Variants Conferring Susceptibility to Psoriasis Alexandros Onoufriadis 2012

Psoriasis is an immune-mediated skin disorder that is inherited as a complex trait. Although genome-wide association studies (GWAS) have identified a number of common disease susceptibility alleles, a substantial fraction of psoriasis heritability remains unexplained, suggesting the possibility that rare variants may also be pathogenic. The aim of this project was to further investigate this hypothesis and explore different approaches to the identification of rare susceptibility alleles. A candidate gene approach was initially undertaken, through the re-sequencing of RNF114, a gene that had been associated with psoriasis in various GWAS. This led to the identification of four novel promoter variants (c.-660A, C.-640A, C.-410T and c.-9A>C) which collectively demonstrate significant association with the disease (P 0.01). The functional characterisation of two representative substitutions showed that they both affected Sp1 binding as well as RNF114 promoter activity. In the second part of the study, a positional cloning approach was applied to the analysis of a multigenerational psoriasis pedigree, where the disease appeared to segregate as an autosomal dominant trait. Tentative evidence for linkage (LOD -2) was obtained for two regions on chromosomes 2p21 and 15q25. However, next-generation sequencing of an affected family member failed to identify any pathogenic mutation within the above intervals. In the final part of the study, five unrelated patients affected by a rare and severe variant of psoriasis (generalised pustular psoriasis) were analysed by whole-exome sequencing. (Arg48Trp) of the IL36RN gene, which encodes a protein antagonizing the activity of IL-36 /tokines. An ex-vivo analysis of patient cells demonstrated a marked increase in cytokine reduction upon IL-36A stimulation, suggesting that GPP mutations may affect the anti-inflammatory function of IL36RN. While this work suggests that rare variants are likely to contribute to the pathogenesis.

*SONAR - Ultrasound Scoring in Rheumatoid Arthritis, Spondyloarthritis and Psoriasisarthritis* Giorgio Tamborrini 2019-08-27 SONAR (Swiss Sonography Group in Arthritis and Rheumatism) is a musculoskeletal ultrasound expert group founded in 2008. The group has developed a semi-quantitative score for Rheumatoid Arthritis using modified OMERACT criteria for synovitis, tenosynovitis and erosions. The score includes B mode and Powerdoppler mode in finger joints, wrists, elbows and knees, an erosion and tenosynovitis score and additional cartilage measurement in selected joints. 2015 we developed and introduced a semi-quantitative score for hip involvement in Spondyloarthritis and started teaching the score to rheumatologists nationwide (Sonar-Hip or CoxSonar Score). Since 2008 we promote musculoskeletal ultrasound (msus) in the management of RA patients to increase the role of msus in RA and to improve patient outcomes. The Sonar-group offers msus courses to improve practical skills. The scientific committee of the Sonar-group works with and supports the SCQM (www.scqm.ch) In 2018, the SONAR group has decided to focus more on the use of ultrasound in psoriatic arthritis and spondylarthritis. We have started a project concerning the implementation of a newly defined ultrasound enthesitis score in the registry. A preliminary score based on the OMERACT definition of ultrasound elementary lesions observed in inflammatory enthesitis has been developed. The implementation process into SCQM has been finalized in 2019 followed by a validation study and teaching courses.

*Atlas of Women's Dermatology* Lawrence Charles Parish MD 2006-01-13 Proving again that a picture is worth a thousand words, Atlas of Women's Dermatology: From Infancy to Maturity is an encyclopedia in pictorial format. The book illustrates diseases and conditions that demonstrate the very different morphology between

the sexes. It includes clinical entities that help complete a section or because the lack of gender

**A Molecular Genetic Analysis of Crohn's Disease Susceptibility Loci in Psoriasis** Maria Quaranta 2012

Psoriasis is an immune-mediated skin disorder that is inherited as a complex trait. Genome-wide linkage and association studies have identified a major disease susceptibility locus (PSORS1) and several genetic determinants of smaller effect. At least two of these (the IL12B and IL23R genes) have independently been associated with Crohn's disease (CD). Thus, the aim of this project was to investigate the genetic overlap between psoriasis and CD, with a view to identifying shared pathogenic pathways. -- In the first phase of the study, 26 CD variants were genotyped in 1,256 psoriatic patients and 2,938 unaffected individuals. Significant associations (FDR

**Public Anthropology** Edward J. Hecican 2016

Contemporary anthropology has changed drastically in the new millennium, expanding beyond the anachronistic study of "primitive" societies to confront the burning social, economic, and political challenges of the day. In the process, anthropologists often bump up against issues that require them to take a public position--issues such as race and tolerance, health and well-being, food security, reconciliation and public justice, global terror and militarism, and media in the emerging global electronic community. In *Public Anthropology*, Edward J. Hecican provides readers with an opportunity to explore contemporary anthropological research as well as the more public issues that anthropologists must engage with as they conduct that research, while encouraging them to think about how involved anthropologists should be in these issues.