CLINICAL TRIAL REVIEW

Clinical Trial Review is a JDD department designed to provide physicians with information on drugs and devices undergoing clinical testing. It is our goal to inform the reader of the status of select drug and device studies relevant to the practice of dermatology before this information is available through standard channels. To participate in or learn more about these and additional trials, visit www.clinicaltrials.gov.

PSORIASIS

Serum, Cellular, and Imaging Markers of Arthritis in Psoriasis Patients

Psoriatic arthritis (PsA), an inflammatory arthritis associated with psoriasis, affects approximately 650,000 adults in the United States and is associated with increased morbidity and mortality. Joint inflammation and damage arise within the first 2 years of disease in 50% of patients, who manifest bone erosions and joint space narrowing on plain x-rays.

The events that underlie the conversion from psoriasis to PsA are not well understood. This conversion occurs 30% of the time within the first 10 years of psoriasis diagnosis. PsA patients have about a 50% chance of developing joint damage within the first 2 years of disease. A biomarker that identifies subclinical joint inflammation in psoriasis patients would allow for a diagnostic tool to allow for earlier intervention in psoriasis patients and provide a better understanding of the underlying molecular pathogenesis that may lead to development of new therapeutic targets in PsA.

The advent of tumor necrosis factor antagonists for treatment of PsA has dramatically improved clinical response and slowed bone and cartilage degradation. Nevertheless, up to 45% of patients do not meet primary endpoints in clinical trials, which underscores the need for new therapeutic options. The researchers' long-term goals are to: 1) develop arthritis biomarkers in psoriasis patients that will facilitate early treatment interventions; and 2) identify new therapeutic targets in PsA through better understanding the underlying molecular pathogenesis.

Condition	Intervention
Psoriasis	Observational
Sponsor: University of Rochester **Collaborator:** Rheumatology Research Foundation **Study ID Numbers:** RSRB 53131 **ClinicalTrials.gov Identifier:** NCT02413801	

A First in Human Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of an Intravenous Dose of GSK2831781 in Healthy Subjects and Patients With Plaque Psoriasis

This study is a phase I, randomised, double blind (sponsor unblinded), placebo-controlled, single ascending dose study GSK2831781 administered by IV. GSK2831781 is a humanized antibody dependent cell cytotoxicity enhanced monoclonal afucosylated antibody that is specific to the lymphocyte activation gene-3 (LAG-3) protein. This is the first administration of GSK2831781 in humans and will evaluate in 2 parts the safety, tolerability, pharmacokinetics, pharmacodynamics, and immunogenicity of single IV doses of GSK2831781 administered to healthy subjects previously vaccinated with Bacillus Calmette Guérin (BCG) (Part A, delayed type hypersensitivity [DTH] cohorts) and patients with plaque psoriasis (Part B).

The inclusion of DTH and psoriasis subjects to explore the mechanism in biopsies and clinical response endpoints in these populations, as well as investigate systemic biomarkers, will provide useful information prior to conducting studies in other immune-inflammatory diseases, which will involve more invasive tissue biopsies. Measuring the pharmacology of GSK2831781 using the depletion of LAG-3 + T-cells in skin biopsies from tuberculin purified protein derivative skin challenge and lesional skin biopsies from patients with psoriasis will be helpful in understanding the dose response relationship, which will be important for designing future studies in immuno-inflammatory diseases, including psoriasis. Approximately 63 subjects will be enrolled to complete dosing and critical assessments. The subject numbers will be split to approximately 31 healthy subjects (Part A) and 32 patients with psoriasis (Part B).

Condition	Drug
Psoriasis	GSK2831781
Sponsor: GlaxoSmithKline **Collaborator:** Parexel **Study ID Numbers:** 200630 **ClinicalTrials.gov Identifier:** NCT02195349	

ONYCHOMYCOSIS

Study to Evaluate the Efficacy and Safety of P-3058 10% Nail Solution in the Treatment of Toenail Onychomycosis

The purpose of this multicenter, randomized, double-blind, parallel, vehicle-controlled study is to evaluate the efficacy and safety of P-3058 10% nail solution as a safe and effective treatment for onychomycosis. Complete cure of the target great toenail is defined as negative potassium hydroxide (KOH) microscopy, negative culture for dermatophytes, and target nail

totally clear. Secondary outcome measures are a responder rate of the target toenail, defined as negative KOH microscopy, negative culture for dermatophytes, and ≤10% residual involvement of the target toenail. Overall safety will be gaged by recording any adverse event during the entire study duration and the local tolerability by means of severity scores for skin irritation. Inclusion criteria include male or female patients aged 12 years and older of any race with onychomycosis involving ≥ 20% to ≤ 50% of the target big toenail. Patients must have a positive KOH examination and culture positive for dermatophyte.

Condition	Drug
Onychomycosis	P-3058 10; amorolfine 5%
Sponsor: Polichem S.A. **Study ID Numbers:** PM1331; 2015-000561-31 **ClinicalTrials.gov Identifier:** NCT02549001	

SKIN CANCER

Photodynamic Therapy for Prevention of Nonmelanoma Skin Cancer in Organ Transplant Recipients

The study will draw patients from the Transplant Dermatology specialty clinic, where the investigators see organ transplant recipients for regular screening, and which serves as a regional referral center for this population. Enrollment will be limited to 20 patients. Inclusion criteria are organ transplant recipients' status, active immunosuppression for at least 5 years, and history of at least one nonmelanoma skin cancer.

Patients will receive Levulan Kerastick (aminolevulinic acid) to the face and/or scalp (if both are needed, treated separately on back to back days); incubation of 2.5 hours; and blue light photodynamic therapy (PDT) using the DUSA Pharmaceuticals, Inc., BLU-U device administered quarterly for 3 years. Patients who change systemic immunosuppression regimens or add or increase systemic chemoprevention while in the study will be excluded from the overall analysis. The patients will be evaluated by the principal investigator every 3 months, prior to PDT administration.

Condition	Drug
Nonmelanoma skin cancers	**Levulan Kerastick (aminolevulinic acid) solution**
Sponsor: Inova Health Care Services **Collaborator:** DUSA Pharmaceuticals, Inc. **Study ID Numbers:** 15-1845 **ClinicalTrials.gov Identifier:** NCT02751151	

AGED SKIN

Retinol-Induced Dermatitis in Aged Skin

Topical therapy with retinoids is the only proven medical therapy for aged/photoaged human skin. However, topical therapy with retinoids often results in unwanted cutaneous dermatitis, including erythema and scaling. The researchers intend to investigate the dose, frequency of use, and time dependence of topical retinol-induced dermatitis. They will evaluate retinoid-induced dermatitis biochemically, including retinol regulation of retinoid responsive genes that control retinoid metabolism and serve as markers for retinoid bioactivity. The researchers will also investigate the role of the epidermal growth factor receptor signaling pathway in retinoid-induced dermatitis.

Inclusion criteria include males and females of at least 21 years of age in good general health, with no disease states of medications that would impair evaluation of the test sites, no use of oral retinoids in the past year, no use of topical steroids in the past 2 weeks, and a willingness and ability to follow protocol.

Condition	Intervention
Aged skin; photoaged skin	Observational
Sponsor: University of Michigan **Study ID Numbers:** HUM00026851/Derm 604 **ClinicalTrials.gov Identifier:** NCT00857610	