



ASX & MEDIA RELEASE

Start of Phase IIb AK clinical trial

EMERYVILLE, California and BRISBANE, Australia, 25 June 2008: Peplin, Inc. (ASX:PLI) today announced the treatment of the first patient in PEP005-015, a dose ranging Phase IIb clinical trial in patients with actinic (solar) keratosis (AK) lesions on head (comprising face and scalp) locations. This trial is a US and Australian multi-center, randomized, double blind, vehicle controlled clinical trial to evaluate the safety and efficacy of each of three concentrations (0.005%, 0.010% or 0.015%) of PEP005 (ingenol mebutate) Gel.

PEP005 (ingenol mebutate) Gel is Peplin's proprietary product being developed for the treatment of AK, a pre-cancerous skin condition which can progress to skin cancer.

Sydney dermatologist and an investigator in the clinical trial, Dr Robert Rosen said "The goal of therapy and in managing skin cancer for our population is moving towards addressing the initial problem of AK lesions as early as possible, and before they can progress to skin cancer."

"Unfortunately, the major challenge we face is patient dissatisfaction with the current topical medications which have long durations of treatment, pain, and persisting skin irritation and redness. As a result, patients are often unwilling to use their medications, particularly for lesions on the face and scalp. Therefore a gel medication which can effectively and conveniently treat AK lesions in two or three days would be of significant benefit to doctors and their patients."

Peplin CEO Michael Aldridge said "We are pleased to have initiated this study in a time frame consistent with the expectations we have set in the investment community."

"In earlier studies we have been pleased to report the activity of our drug in clearing AK lesions on the face. The goal of this study is to confirm the optimum drug concentration to take into our Phase III Head program and also to test whether a two or three day course of treatment is better," he said.

Patients participating in this trial are being randomized into two treatment arms, either a two day or three day treatment regimen. Patients in each treatment arm apply either one of the active concentrations of PEP005 (ingenol mebutate) Gel or the vehicle gel to AK lesions on head locations. Peplin expects to enroll approximately 240 patients who would apply the study medication or vehicle gel to a 25 cm² treatment area containing four to eight AK lesions. The medication would be applied at home once a day for either two or three consecutive days.

The primary efficacy endpoint for this clinical trial will be the complete clearance rate of AK lesions and the secondary efficacy endpoint will be the partial clearance rate of AK lesions. Peplin will evaluate efficacy on the 57th day after treatment.

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This Phase IIb clinical trial is intended to support the design of a subsequent Phase III clinical trial in patients with AK lesions on head locations, which Peplin plans to initiate in 2009, assuming a successful End-of-Phase II meeting with the FDA.

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ABOUT PEPLIN

Peplin is a development stage specialty pharmaceutical company focused on advancing and commercializing innovative medical dermatology products. Peplin is currently developing PEP005 (ingenol mebutate), which is the first in a new class of compounds and which is derived from the sap of *Euphorbia peplus*, or *E. peplus*, a rapidly growing, readily available plant commonly referred to as petty spurge or radium weed. *E. peplus* has a long history of traditional use for a variety of conditions, including the topical self-treatment of various skin disorders, including skin cancer and pre-cancerous skin lesions. Peplin's lead product candidate is a patient-applied topical gel containing ingenol mebutate, a compound the use of which Peplin has patented for the treatment of actinic keratosis, or AK. This product candidate is currently in Phase II clinical trials and is referred to as PEP005 (ingenol mebutate) Gel.

ABOUT AK

AK is generally considered the most common pre-cancerous skin condition. AK usually appears as small, rough, scaly areas on the face, lips, ears, back of hands, forearms, scalp or neck. If left untreated, AK lesions may progress to a form of skin cancer called squamous cell carcinoma, or SCC. The Lewin Group, Inc., estimates that the total direct costs for AK in the United States was \$1.2 billion in 2004, and in 2002 there were approximately 8.2 million office visits for the treatment of AK. The Lewin Group also estimated that there were 58 million people in the United States living with AK in 2004. According to a May 2006 issue of The Journal of Family Practice, in northern hemisphere populations, 11% to 25% of adults have at least one AK lesion, compared with 40% to 60% of adults in Australia, which has the highest prevalence of AK worldwide.

FORWARD LOOKING STATEMENTS

This press release contains "forward-looking statements" as defined under U.S. federal securities laws, including, but not limited to, Peplin's clinical development plan referred to herein. These forward-looking statements can be identified through the use of words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "may," "will," and variations of these words or similar expressions. Forward looking statements are based on management's current, preliminary expectations and actual results could differ materially as a result of various risks and uncertainties, including, but not limited to, delays in the completion of clinical trials resulting from, among other things, ambiguous or negative interim results, failure to close the acquisition of Neosil, Inc., unforeseen safety issues, failure to conduct the clinical trials in accordance with regulatory requirements or clinical protocols, suspension or termination of a clinical trial by the FDA or other regulatory authorities, lack of adequate funding to continue a clinical trial and other important factors disclosed from time to time in Peplin's disclosures to the ASX. Forward-looking statements speak only as of the date they were made. No undue reliance should be placed on any forward-looking statements. Such information is subject to change, and we undertake no obligation to update such statements.