



ASX AND MEDIA RELEASE

Peplin Announces the Initiation of Phase 3 Clinical Trials for PEP005 Gel in AK on the Face and Scalp

EMERYVILLE, California and BRISBANE, Queensland, 8 June 2009: Peplin, Inc. (ASX:PLI) today announced the initiation of two Phase 3 clinical trials to confirm the efficacy and safety of PEP005 (ingenol mebutate) Gel for the treatment of actinic (solar) keratoses (AK), a common pre-cancerous skin lesion, when applied to head locations, which include the face and scalp. These trials are called REGION-IIa and REGION-IIb.

Chief Executive Officer Tom Wiggins said: "Based on the data we have generated up to this point, we believe PEP005 Gel and its short course of therapy represents a significant advance in the treatment of a common skin condition, which if left untreated can progress to squamous cell carcinoma. The REGION-II trials are especially important as they include the face and scalp areas, which comprise an estimated 70% of the AK market and have the potential to provide the most patient benefit. With no other short term treatment available for all anatomical locations currently on the market, the potential benefit for patients is considerable."

Australian-based, Chief Scientific Officer Peter Welburn added: "Following up on our successful dose-ranging Phase 2b head study and positive results from our Phase 3 study for non-head locations, the initiation of the REGION-II trials continues to progress PEP005 Gel through the final stage of clinical development. This advancement is the result of the dedication and enthusiasm of many investigators and employees as well as product performance."

The two pivotal Phase 3 trials, REGION-IIa and REGION-IIb are designed to replicate PEP005 Gel's efficacy and safety in AK as shown in its successful Phase 2b trial PEP005-015, announced in 1Q 2009. The REGION-II trials are each randomised, double-blind, vehicle-controlled clinical trials that will be conducted at multiple sites in the US and Australia and will confirm the safety and efficacy of the proprietary product candidate, PEP005 Gel, when compared to vehicle gel in patients with AK lesions on head locations.

Peplin expects to enrol approximately 250 patients in each trial. These patients will apply the study medication or vehicle gel to a 25-cm² treatment area containing four to eight AK lesions. The PEP005 Gel concentration is 0.015% and will be applied by the patient at home once a day for three consecutive days. The primary efficacy endpoint for the REGION-II trials will be the complete clearance rate of AK lesions and the secondary efficacy endpoint will be the partial clearance rate of AK lesions within the treatment area. In addition, Peplin will measure the overall mean and median reduction of AK lesions.

Peplin recently completed an End-of-Phase 2 meeting with FDA. As a result of the discussion with FDA, Peplin will conduct an additional Phase 3 pivotal trial on non-head locations (REGION-Ib), which includes the trunk and extremities, to corroborate the results of their recently completed REGION-Ia trial. Therefore, there will be a total of four Phase 3 trials: the two newly initiated head trials (REGION-IIa and REGION-IIb), the recently completed non-head trial (REGION-Ia) and the upcoming non-head trial (REGION-Ib).

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Peplin believes that its current cash will be sufficient to fund the completion of Phase 3 testing of PEP005 Gel for AK on both the head and non-head locations and plans to file a New Drug Application in mid-2010.

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ABOUT PEPLIN

Peplin is a development stage specialty pharmaceutical company focused on advancing and commercialising innovative medical dermatology products. Peplin is currently developing ingenol mebutate, or PEP005, which is a novel compound 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 (solar) keratosis, or AK. This product candidate referred to as PEP005 (ingenol mebutate) Gel is currently in Phase 3 clinical trials, having just completed their first Phase 3, known as REGION-1a.

ABOUT AK

Actinic keratoses (AK), also known as solar keratosis or sun spots, 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 and timing of clinical trials 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 clinical trials resulting from, among other things, ambiguous or negative interim results, 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 and in its Form 10 Registration Statement and most recent quarterly report on Form 10-Q filed with the US Securities and Exchange Commission. 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.