



ASX AND MEDIA RELEASE

Peplin to present at the BIO Europe Spring 2009 Conference

EMERYVILLE, California and BRISBANE, Australia, 16 Mar 2009: Peplin, Inc. (ASX:PLI) announced today that Chief Commercial Officer George Mahaffey will present at the BIO Europe Spring 2009 Conference at the Milano Convention Centre (MIC) in Milano, Italy on Tuesday, March 17.

A copy of the presentation material is attached to this release.

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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 (solar) keratosis, or AK. This product candidate is currently in Phase III clinical trials (trial known as REGION-I) and is referred to as PEP005 (ingenol mebutate) Gel.

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, 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

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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.



Developing the next generation of dermatology products
to treat serious skin diseases

George Mahaffey
Chief Commercial Officer

www.peplin.com

Forward Looking Statements

This presentation contains "forward-looking statements" as defined under the U.S. federal securities laws including, but not limited to, statements regarding Peplin's future clinical development program, the timing of FDA filings and its target market. Actual events could differ materially from those anticipated in the forward-looking statements as a result of certain factors, including but not limited to: the results and duration of clinical trials, the ability to retain and attract key employees, and other events and important factors disclosed in Peplin's filings with the U.S. Securities and Exchange Commission and its disclosures to the ASX. Peplin disclaims any obligation to update any such forward-looking statements after the date of this presentation.

Peplin Overview

- Novel Phase III product candidate, PEP005 (ingenol mebutate) Gel, with compelling and consistent clinical trial results
- Large and growing market for actinic keratosis and other skin diseases
- Dissatisfaction with current topical therapies
- Peplin's potential product has major advantages over existing treatments:
 - Ultra-short treatment duration (days vs. months)
 - Favorable side-effect profile observed in trials to date
- Expect to file with FDA for US marketing approval by mid-2010

Euphorbia Peplus



- Common plant
- European origin
- Early 1800's sap used topically to treat dermatological conditions
 - warts, corns, waxy growths, skin cancers
- Effective home remedy to treat skin cancers ⁽¹⁾

1) *Australasian Journal of Dermatology*, 1988

Actinic Keratosis (AK)



- Caused by accumulated sun damage
- Can unpredictably transition to Squamous Cell Carcinoma (SCC)
 - 67% of cases had prior AK diagnosis⁽⁴⁾
 - 1,300 to 2,300 US deaths per year⁽¹⁾
 - Expensive and difficult treatment
- Affects more than 58 million Americans⁽²⁾, increasing with age
- 5.6 million office visits annually⁽³⁾
 - 8.2 million office visit estimates have been published ⁽²⁾
- \$1.2 billion annual direct cost in US⁽²⁾
- 25% of all treatments involve topical therapies⁽⁴⁾

1) *Dermatol Surg* 2007;33:1099-1101

2) *Lewin Group, The Burden of Skin Diseases 2005*

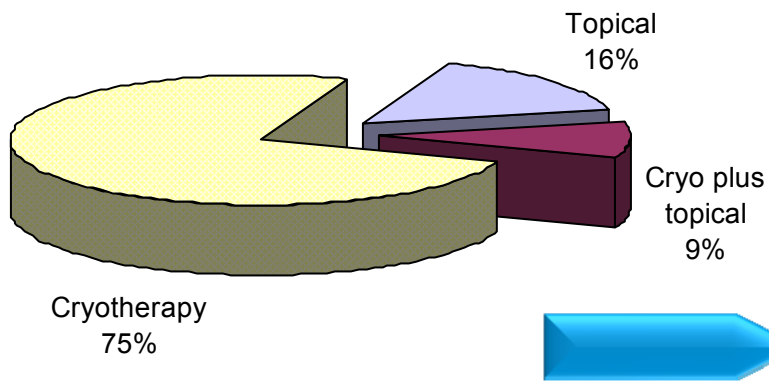
3) *US office visits for AK, NAMCS database (Aug. for 2001-2005)*

4) *Journal of Dermatological Treatment*, 2006; 17: 162-166

US Market Opportunity

Actinic keratosis is one of the most frequently diagnosed skin disease by US dermatologists

Topical treatment in the US



Topical treatments during office visits

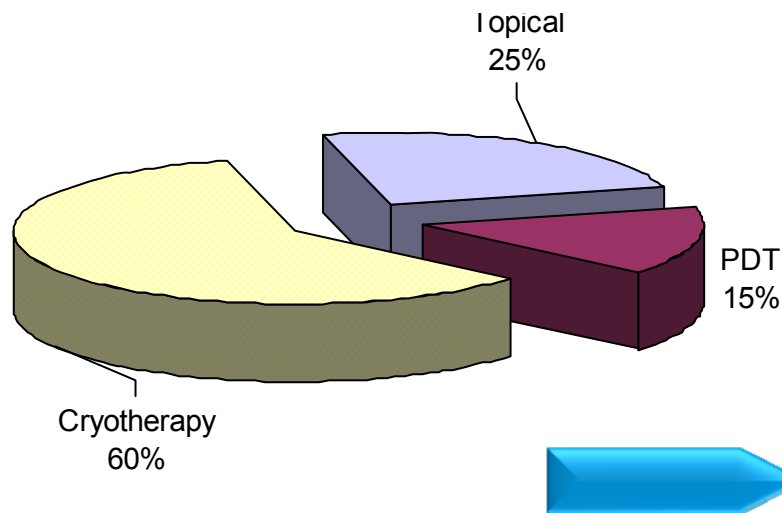
| | |
|------------------------------------|---------------|
| Total office visits ⁽¹⁾ | 5.6 M |
| Proportion treated | 90% |
| Treatment visits | 5.0 M |
| Topical treatments ⁽²⁾ | 25% |
| Annual topical treatments | 1.26 M |

1) US office visits for AK, NAMCS database (Aug. for 2001-2005)

2) Journal of Dermatological Treatment, 2006; 17: 162-166

European Market Opportunity

Estimated topical treatment in Europe



Topical treatments during office visits

| | |
|-----------------------------------------------|---------------|
| European population (>40) ⁽¹⁾ | 162.4 M |
| Europe prevalence ⁽²⁾ | 10.5% |
| Proportion diagnosed & treated ⁽³⁾ | 20% |
| Treatment visits | 2.5 M |
| Topical treatments ⁽⁴⁾ | 25% |
| Annual topical treatments | 0.63 M |

- 1) EUROSTAT, US Census Bureau, and CIA World Factbook. Includes UK, France, Germany, Italy and Spain over 40 population
- 2) British Journal of Dermatology, 142: 1154 – 1159
- 3) Halpern et al. (2005) International Journal of Dermatology; 44:107
- 4) Peplin preliminary market research

PEP005 Gel vs. AK treatment options

| Approach | Major benefits | Major short-comings |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cryotherapy (liquid nitrogen) | <ul style="list-style-type: none"> • Quick and inexpensive • Historically attractive reimbursement • Well established modality | <ul style="list-style-type: none"> • Only discrete lesions • Short term localized pain, irritation • Potential long term scarring • 1 year recurrence rate of 72% ⁽¹⁾ • Declining reimbursement ⁽³⁾ |
| Photodynamic Therapies (PDT) (aminolevulinic acid HCl, methyl aminolevulinate) | <ul style="list-style-type: none"> • Single topical application | <ul style="list-style-type: none"> • Irradiation after incubation period • Burning and stinging • Requires dedicated equipment • Challenging reimbursement |
| Topicals (imiquimod, 5-FU, diclofenac sodium) | <ul style="list-style-type: none"> • Apply at home • Efficacy • Cosmesis | <ul style="list-style-type: none"> • Length of therapy (1-4 months) • Compliance • Local skin responses/pain, intensity • Local skin responses/pain, duration |
| PEP005 Gel (ingenol mebutate) | <ul style="list-style-type: none"> • 2 or 3 day at-home application • Efficacy • Compliance • Cosmesis | <ul style="list-style-type: none"> • Local skin responses |

1) *British Journal of Dermatology* 2007; 157 (Suppl. 2): 34-40
 2) *Product Full Prescribing Information*
 3) *2008 CMS Medicare Fee Schedule*

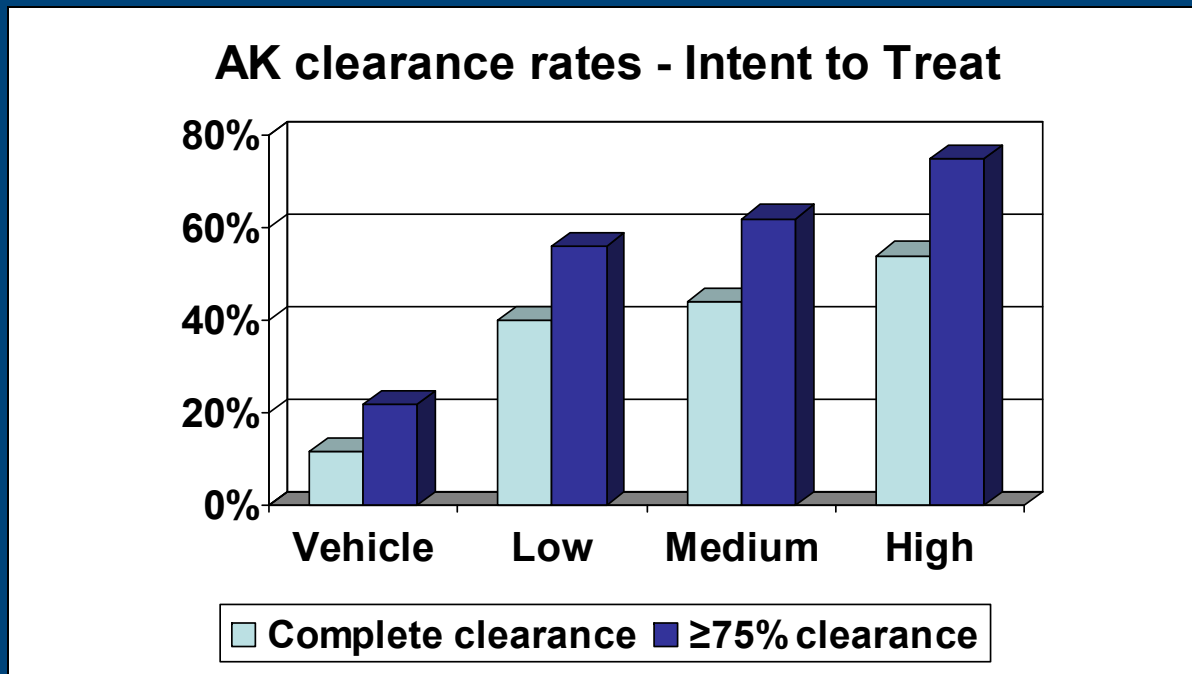
Clinical Overview

- Non-Head (trunk and extremities)
 - PEP005-006: Phase IIb
 - REGION-I: Phase III
- Head (face and scalp)
 - PEP005-007: Phase IIa
 - PEP005-015: Phase IIb
 - Phase III program
- >950 subject exposures to drug

AK Phase II (PEP005-006): Study Design

| | | | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|
| Treatment location | <ul style="list-style-type: none"> • Body and scalp • Patients with 4-8 AK lesions in a 25 cm² treatment area on the arm, shoulder, chest, back or scalp | | |
| Status | <ul style="list-style-type: none"> • Complete | | |
| Number of patients | <ul style="list-style-type: none"> • 222 | | |
| Design | <ul style="list-style-type: none"> • Multi-center, double blind, double dummy, randomized, vehicle-controlled • Four arms: 3 active + 1 vehicle | | |
| | Concentration | Group | Pt Number |
| | – Vehicle | – N/A | 60 |
| | – 0.025% | – D1,2,3 (Low) | 50 |
| | – 0.05% | – DV,2,3 (Medium vehicle D1) | 55 |
| | – 0.05% | – D1,2,3 (High) | 57 |
| Endpoints | <ul style="list-style-type: none"> • Evaluating safety and efficacy | | |

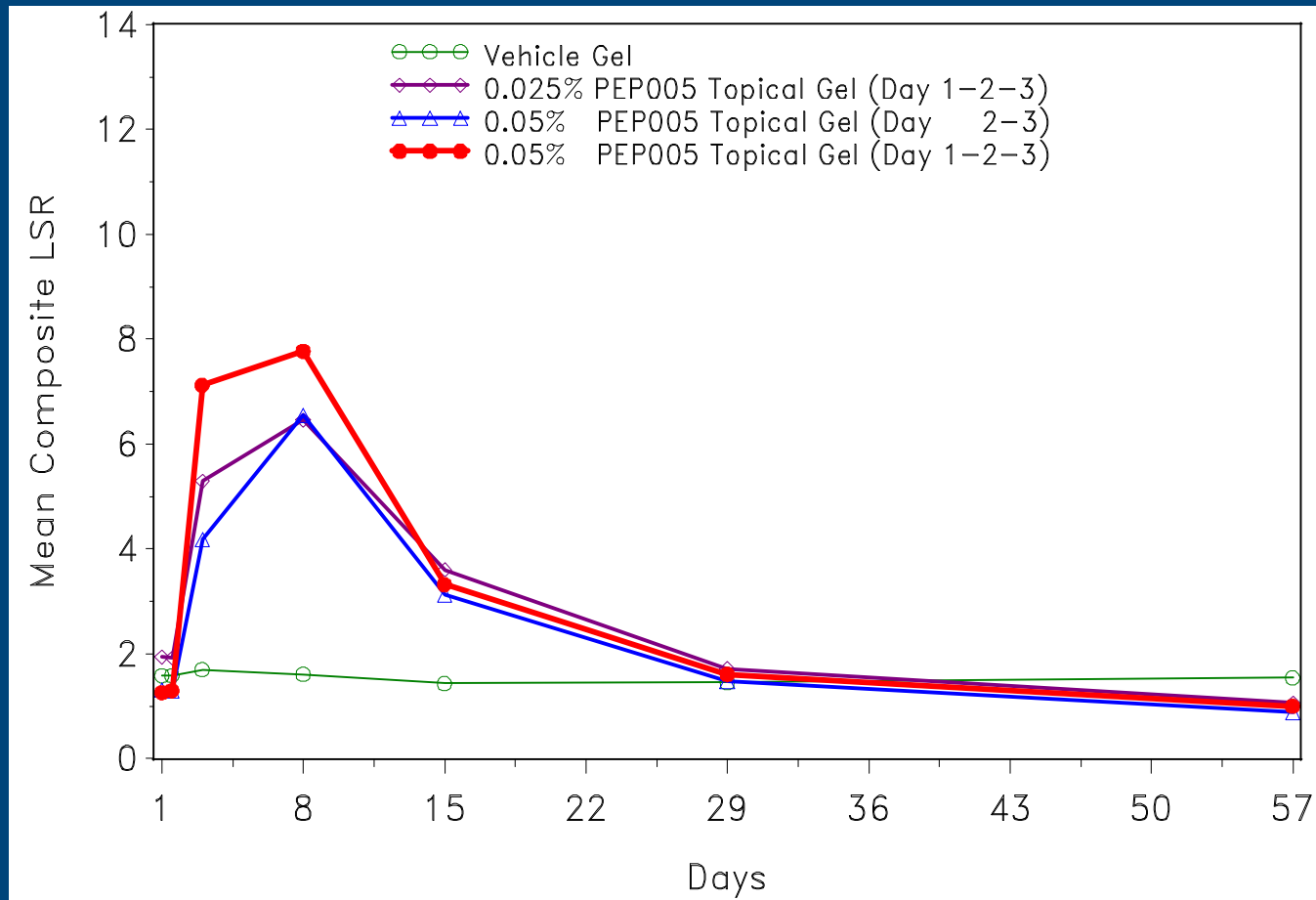
AK Phase II (PEP005-006): Efficacy Results



| Medium strength data | 0.05% (Two days) N=55 | Vehicle N=60 | P-value |
|--------------------------|--------------------------|-----------------|---------|
| Complete clearance rate | 44% | 12% | 0.0001 |
| Partial clearance rate | 62% | 22% | <0.0001 |
| Median percent reduction | 83% | 0.0% | <0.0001 |

AK Phase II (PEP005-006): Safety

Time course of local skin response



AK Phase II (PEP005-006): Patient Satisfaction

At End of Study patients were asked impression of the treatment:

- Overall satisfaction
- Convenience of use
- Healing time
- Cosmetic outcome
- Comparison with prior treatment

Overall Level of Satisfaction [overall $p < 0.0001$]

| | Low (N=50) | Medium (N=55) | High (N=57) | Vehicle (N=60) |
|--------|---------------|------------------|----------------|-------------------|
| Mean | 6.1 | 6.2 | 6.0 | 4.4 |
| Median | 7.0 | 7.0 | 7.0 | 4.0 |

All questions were answered using a 7-point scale where 1 = very negative and 7 = very positive

AK Phase III: Study Design



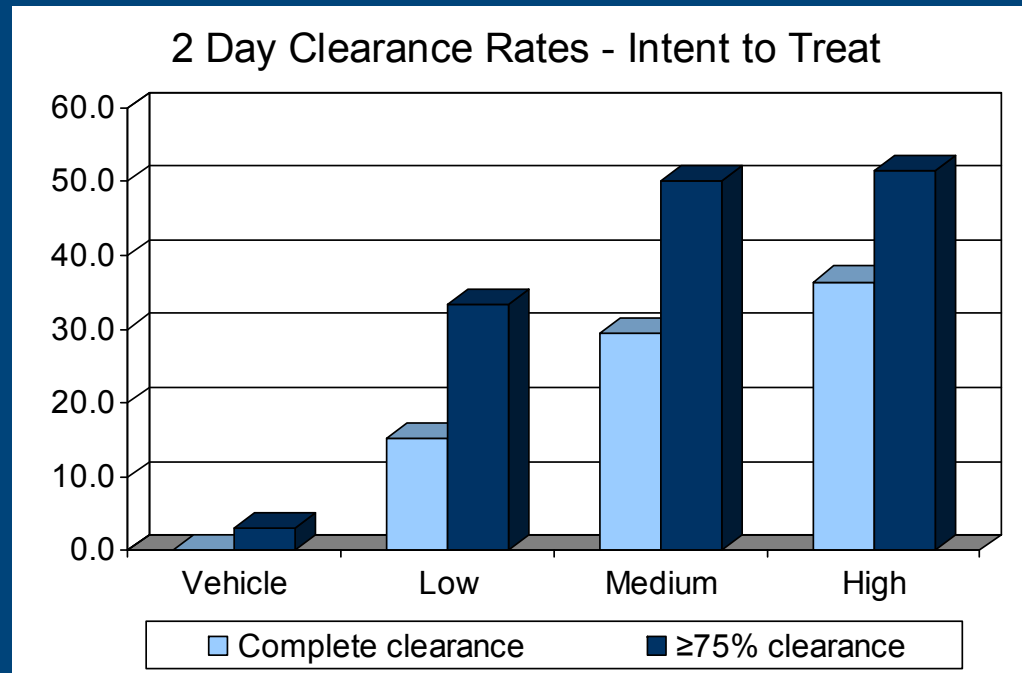
| | |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Treatment location | <ul style="list-style-type: none">• Non-Head (trunk and extremities)• Patients with 4-8 AK lesions in a 25 cm² treatment area |
| Status | <ul style="list-style-type: none">• Enrollment complete, Top Line Report in 1H09 |
| Number of patients | <ul style="list-style-type: none">• 250 total patients |
| Design | <ul style="list-style-type: none">• Randomized, double-blind, vehicle-controlled conducted at multiple sites• Special Protocol Assessment (SPA)• 2 days of treatment• Concentration = 0.05% |
| Endpoints | <ul style="list-style-type: none">• Primary: Complete clearance rate• Secondary: Partial clearance rate (clearance of majority of AK lesions within the area) |

AK Phase IIb (PEP005-015): Study Design

| Treatment location | <ul style="list-style-type: none"> • Head (face and scalp) • Field-treatment | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------|---------------------------|---------------------------|---------------------------|---------|----------|----|----------|----|--------|----------|----|----------|----|-------|----------|----|----------|----|--------|----------|----|----------|----|
| Status | <ul style="list-style-type: none"> • Complete, January 2009 | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of patients | <ul style="list-style-type: none"> • 265 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design | <ul style="list-style-type: none"> • Randomized, double-blind, vehicle-controlled, multiple sites • 6 active arms: 0.005%, 0.010% or 0.015% at 2 or 3 days of treatment vs. vehicle at 2 or 3 days | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Concentration</th> <th>Group</th> <th>ITT⁽¹⁾ Pt No.</th> <th>Group</th> <th>ITT⁽¹⁾ Pt No.</th> </tr> </thead> <tbody> <tr> <td>Vehicle</td> <td>2 day Rx</td> <td>33</td> <td>3 day Rx</td> <td>33</td> </tr> <tr> <td>0.005%</td> <td>2 day Rx</td> <td>33</td> <td>3 day Rx</td> <td>33</td> </tr> <tr> <td>0.01%</td> <td>2 day Rx</td> <td>34</td> <td>3 day Rx</td> <td>34</td> </tr> <tr> <td>0.015%</td> <td>2 day Rx</td> <td>33</td> <td>3 day Rx</td> <td>32</td> </tr> </tbody> </table> | Concentration | Group | ITT ⁽¹⁾ Pt No. | Group | ITT ⁽¹⁾ Pt No. | Vehicle | 2 day Rx | 33 | 3 day Rx | 33 | 0.005% | 2 day Rx | 33 | 3 day Rx | 33 | 0.01% | 2 day Rx | 34 | 3 day Rx | 34 | 0.015% | 2 day Rx | 33 | 3 day Rx | 32 |
| | Concentration | Group | ITT ⁽¹⁾ Pt No. | Group | ITT ⁽¹⁾ Pt No. | | | | | | | | | | | | | | | | | | | | | |
| | Vehicle | 2 day Rx | 33 | 3 day Rx | 33 | | | | | | | | | | | | | | | | | | | | | |
| | 0.005% | 2 day Rx | 33 | 3 day Rx | 33 | | | | | | | | | | | | | | | | | | | | | |
| | 0.01% | 2 day Rx | 34 | 3 day Rx | 34 | | | | | | | | | | | | | | | | | | | | | |
| 0.015% | 2 day Rx | 33 | 3 day Rx | 32 | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endpoints | <ul style="list-style-type: none"> • Primary: Complete clearance rate • Secondary: Partial clearance rate (clearance of majority of AK lesions within the area) | | | | | | | | | | | | | | | | | | | | | | | | | |

1) ITT = Intent to Treat

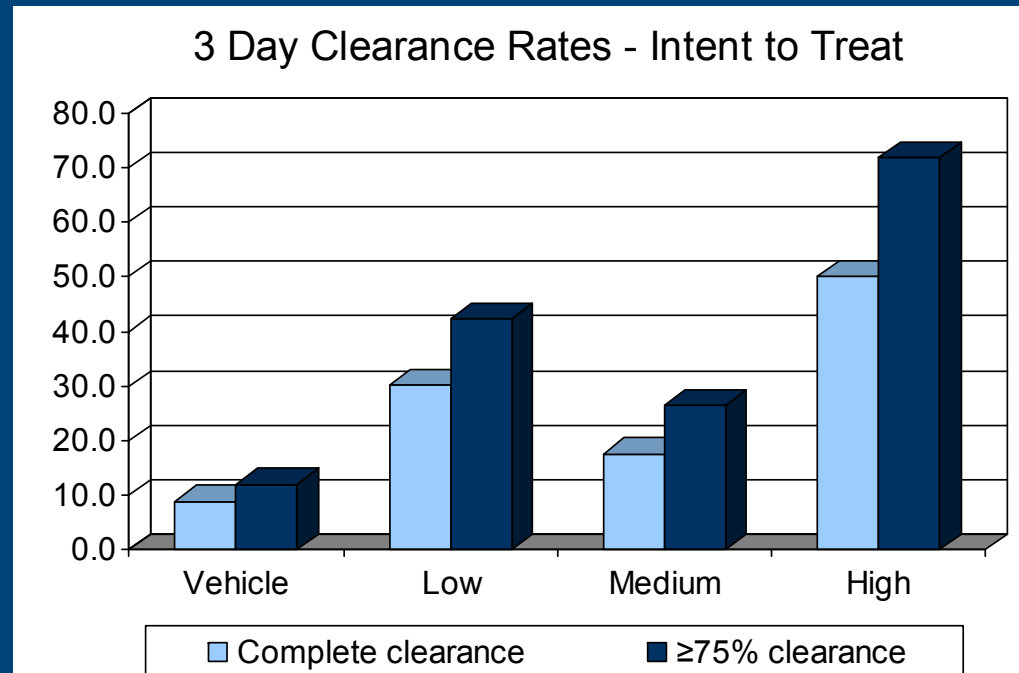
PEP005-015 Efficacy Results (2-Day)



| High strength data (0.015% x 2 days) | Active N=33 | Vehicle N=33 | P-value |
|-----------------------------------------|----------------|-----------------|---------|
| Complete clearance rate | 36.4% | 0.0% | <0.001 |
| Partial clearance rate | 51.5% | 3.0% | <0.001 |
| Median % reduction* | 75.0% | 0.0% | n/a |

*Calculated for per protocol population only

PEP005-015 Efficacy Results (3-Day)

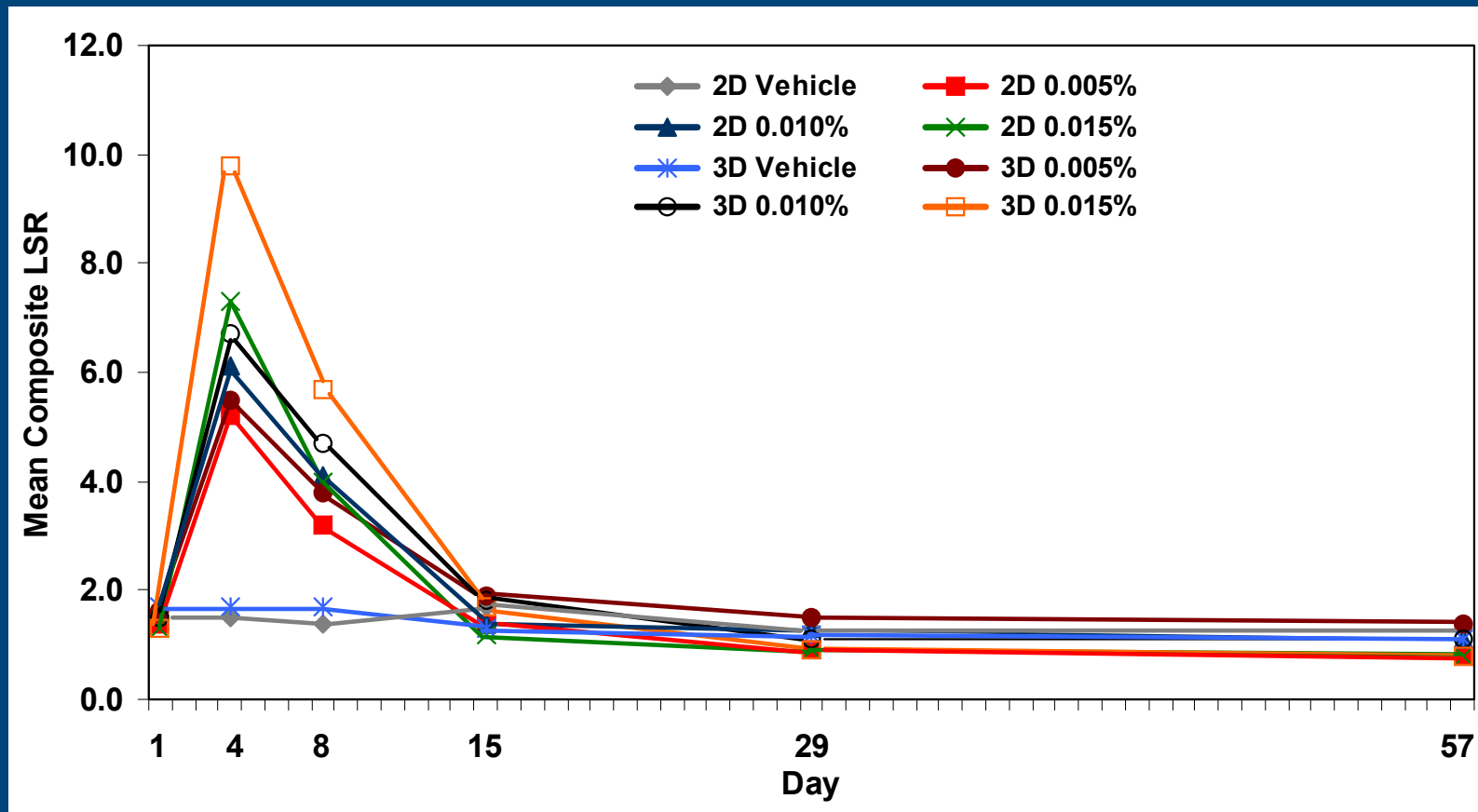


| High strength data (0.015% x 3 days) | Active N=32 | Vehicle N=33 | P-value |
|-----------------------------------------|----------------|-----------------|---------|
| Complete clearance rate | 50.0% | 9.0% | <0.001 |
| Partial clearance rate | 71.9% | 12.1% | <0.001 |
| Median % reduction* | 84.5% | 0.0% | n/a |

*Calculated for per protocol population only

AK Phase IIb Study (PEP005-015): Safety

Time course of composite Local Skin Response



PEP005-015 Patient Satisfaction

At End of Study patients were asked 14 questions covering 4 domains on the patients perception of satisfaction with:

- Treatment (effectiveness)
- Side effects
- Convenience
- Global satisfaction

Summary of Global Satisfaction

- statistically significant between all active treatment groups and placebo

| | 2 Day Treatment | | | | 3 Day Treatment | | | |
|--------|-------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| | Vehicle (N=29) | 0.005% (N=32) | 0.010% (N=34) | 0.015% (N=33) | Vehicle (N=33) | 0.005% (N=30) | 0.010% (N=33) | 0.015% (N=26) |
| Mean | 28.8 | 66.1 | 74.0 | 77.2 | 38.2 | 60.7 | 71.6 | 71.7 |
| Median | 14.3 | 75.0 | 78.6 | 78.6 | 39.3 | 67.9 | 78.6 | 78.6 |

All questions were answered using TSQM Version 1.4, series of questions which could total up to 100

The Peplin Solution

PEP005 (ingenol mebutate) Gel for AK: Product Profile

| | | |
|---------------------|-------------------------------------------------------------------------------------------------------------------|---------------------|
| Description | Patient applied topical gel | |
| Course of therapy | Once-a-day for two or three consecutive days | |
| Packaging | Two or three single use mini-tubes | |
| Side effect profile | Localized erythema, flaking or scaling, crusting, vesicles and swelling. Peaks in 3-8 days, resolves in 2-4 weeks | |
| Treatment area | Non-head (2 day) | Head (3 day) |
| Concentration | 0.05% (PEP005 Gel) | 0.015% (PEP005 Gel) |

Milestones

- Results Head AK Phase IIb Jan 2009
- Results Non-head AK Phase III (REGION-I) H1 2009
- End of Phase II meeting with FDA 2Q 2009
- Initiate Head AK Phase III program 2Q 2009
- Completion of AK Phase III program 4Q 2009
- File New Drug Application with US FDA Mid-2010

Peplin Strategy

- License non-US and non-Australian rights to partner(s)
- File NDA for PEP005 (AK) in US by mid-2010
- Commercialize US territory
- Pursue AK approval with TGA in Australia
- Commercialize Australian territory
- Continue development of PEP005 for Basal Cell Carcinoma (BCC) and other indications



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George Mahaffey
Chief Commercial Officer

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