This presentation contains forward-looking statements, including statements regarding the progress, timing and results of our clinical trials, safety and efficacy of our product candidates, timing and potential approval of our product candidates and timing and potential commercial success of our products. These statements constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The words “may,” “might,” “will,” “should,” “estimate,” “project,” “plan,” “anticipate,” “expect,” “intend,” “outlook,” “believe” and other similar expressions are intended to identify forward looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this release and we undertake no obligation to update any forward-looking statement in this press release except as required by law. These forward looking statements are based on estimates and assumptions by our management that, although we believe to be reasonable, are inherently uncertain and subject to a number of risks and uncertainties.

The following represent some, but not necessarily all, of the factors that could cause actual results to differ from historical results or those anticipated or predicted by our forward-looking statements; any delay or failure by the FDA to approve Kerydin, our ability to timely and successfully launch, either alone or with a partner, Kerydin, any issues or delays arising during the course of our Phase 3 studies or other clinical trials relating to AN2728, any delay or failure by FDA to approve AN2728, our ability to timely and successfully launch, either alone or with a partner, AN2728, and the other risks identified in our periodic filings, including our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014.
A Biopharmaceutical Company
Developing Multiple Drug Candidates
Using Novel and Proprietary Boron Chemistry
## Lead Proprietary Product Candidates Target Attractive Markets

<table>
<thead>
<tr>
<th>Kerydin</th>
<th>AN2728</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topical product candidate for mild-to-moderate onychomycosis of the toenail</strong></td>
<td><strong>Non-steroidal topical product candidate for mild-to-moderate atopic dermatitis</strong></td>
</tr>
</tbody>
</table>

### Onychomycosis
- Fungal infection of the nail affecting ~30M-35M people in the U.S.\(^{(1)}\)
  - ~5M–6M patients seek treatment
    - ~2M treated with FDA-approved products, primarily orals

### Kerydin Target Product Profile
- Novel antifungal
- In fast-drying solution
- Convenient topical application

- 7/29/14 PDUFA date
- Expected launch 3Q14 pending approval
- Small targeted field force can reach podiatrists and dermatologists who treat large proportion of patients

### Atopic dermatitis
- Chronic itchy rash affecting ~18 million people in the U.S., primarily children\(^{(2)}\)
- Current treatment options include topical steroids and topical calcineurin inhibitors

### AN2728 Target Product Profile
- Topical PDE-4 inhibitor
- To reduces inflammation and itch associated with atopic dermatitis

- Demonstrated promising safety and efficacy profile in four clinical studies
- Currently in pivotal Phase 3 clinical trials with data expected in 2H15

---

\(^{(1)}\) Source: Podiatry Today  \(^{(2)}\)Source: National Eczema Association
Our Lead Program - Kerydin

Kerydin
Target Product Profile:
- Effective
- Safe
- Easy-to-use

Topical treatment for mild-to-moderate onychomycosis of the toenail
Onychomycosis – a Highly Prevalent Fungal Infection of the Nail and Nail Bed

- Affects ~35M people in the United States\(^{1}\) including 1 in 3 diabetics\(^{2}\)
  - Only ~5M-6M people diagnosed and seeking treatment
- Although not life threatening, there are consequences if left untreated:
  - It can damage the nail unit and spread to other toes and skin
  - In diabetic patients, it increases risk of secondary infections, foot disorders and limb amputations
- Even after treatment, relapse is common
  - 20%-50% of patients treated with approved orals relapse within 5 years \(^{3}\)

\(^{1}\) Source: Podiatry Today
\(^{2}\) Source: American Diabetes Association
\(^{3}\) Source: Archives of Dermatology
### FDA-approved Treatments

**(~2M patients)**

Demonstrated ability to eliminate fungal infection

**Oral (Primarily Lamisil)**
- Most efficacious approved treatment
- Safety considerations
  - Liver function tests recommended prior to using Lamisil due to potential hepatotoxicity

**Topical (Penlac)**
- Efficacy achieved with concomitant debridement, as often as monthly
- Inconvenient to apply
  - Lacquer applied daily takes time to dry
  - Must be removed weekly with alcohol

### Non FDA-approved Treatments

**(~3M-4M patients)**

**Debridement**
- Clipping, cutting, or removal of nail to improve appearance
- Performed in physician’s office
- Does not eliminate infection

**OTC Topicals and Formula 3**
- Convenient to use but have not demonstrated efficacy

**Lasers**
- Temporarily improves appearance of the nail
Before Generic Entry, the Leading Rx Products Achieved $950M in Combined Annual U.S. Sales

<table>
<thead>
<tr>
<th></th>
<th>Oral Lamisil (terbinafine)</th>
<th>Oral Sporanox (itraconazole)</th>
<th>Topical Penlac (ciclopirox)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2003 U.S. Sales</strong></td>
<td>$646M</td>
<td>$162M</td>
<td>$143M</td>
</tr>
<tr>
<td><strong>2012 NRx’s(1)</strong></td>
<td>1.5M</td>
<td>23K</td>
<td>413K</td>
</tr>
<tr>
<td>(branded and generic)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Our market research suggests:
- Promotionally sensitive marketplace
- High unmet need supports trial, use and adoption

(1) Source: IMS data
**Our Solution for Onychomycosis**

<table>
<thead>
<tr>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Potent against broad spectrum of fungi and yeast</td>
</tr>
<tr>
<td>- Unique MOA - targets LeuRS to kill fungus</td>
</tr>
<tr>
<td>- Demonstrated efficacy in two Phase 3 studies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Local, targeted therapy</td>
</tr>
<tr>
<td>- Little or no detectable systemic exposure</td>
</tr>
<tr>
<td>- All preclinical toxicology completed</td>
</tr>
</tbody>
</table>

### Kerydin

**Target Product Profile**
- Effective
- Safe
- Easy-to-use

*Topical treatment for mild-to-moderate onychomycosis of the toenail*

### Easy to Use
- Solution applied with dropper once daily
- Dries in about one minute
- No special cleansing or preparation prior to application
Kerydin Met Primary and Secondary Endpoints with Statistical Significance in Two Phase 3 Studies

- Enrolled subjects ages 18 years and older with no upper age limit
- 20% - 60% disease involvement at baseline
- No nail debridement or excessive nail trimming allowed

<table>
<thead>
<tr>
<th>Efficacy Variable at 52 Weeks</th>
<th>Study 301 (1) (N = 594)</th>
<th>Study 302 (1) (N = 601)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Endpoint:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete cure (2)</td>
<td>6.5% / 0.5%</td>
<td>9.1% / 1.5%</td>
</tr>
<tr>
<td><strong>Secondary Endpoints:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completely clear nail or almost clear nail (3)</td>
<td>26.1% / 9.3%</td>
<td>27.5% / 14.6%</td>
</tr>
<tr>
<td>Mycological cure (4)</td>
<td>31.1% / 7.2%</td>
<td>35.9% / 12.2%</td>
</tr>
<tr>
<td>Treatment success (5)</td>
<td>15.3% / 1.5%</td>
<td>17.9% / 3.9%</td>
</tr>
<tr>
<td>Negative culture</td>
<td>87.0% / 47.9%</td>
<td>85.4% / 51.2%</td>
</tr>
</tbody>
</table>

**Safety Observations**

- Rate of discontinuations as a result of adverse events: 2.8% / 1.6% 0.8% / 0.5%
- No serious adverse events related to study drug

(1) P-values for efficacy results ≤ 0.001
(2) Completely clear nail and mycological cure (defined as negative culture and negative KOH) of target great toenail
(3) ≤ 10% target toenail involvement
(4) Negative KOH and negative culture
(5) Completely clear or almost clear nail + mycological cure
After 48 Weeks of Treatment with Kerydin, >25% of Patients Had a Clear or Almost Clear Nail

Baseline

Patient 1

“Completely Clear Nail”
no clinical evidence of onychomycosis at week 52

Baseline

Patient 2

“Almost Clear Nail”
<10% nail involvement at week 52
Market Research Survey Suggests Physicians Would Prescribe New Topicals to ~50% of Their Onychomycosis Patients

*Assumes Kerydin and efinaconazole are launched at same time and does not account for potential differences in pricing or label
Source: Anacor market research survey, September 2013. Survey of 96 PCP’s, 150 dermatologists and 158 podiatrists.
Large Number of Onychomycosis Patients Seeking Treatment Supports Kerydin Market Opportunity

~5M-6M Patients Diagnosed in the U.S. by Podiatrists, Dermatologists and PCP’s (1)

~30% Patient Share to New Class of Topicals (2)

~50% Share to Kerydin (2)

Potential Kerydin patient base: 750K – 900K

(1) Source: Podiatry Today
(2) Source: Anacor 2013 Market Research Survey
Our Lead Topical Anti-inflammatory – AN2728

AN2728
Target Product Profile:

• Effective
• Safe
• Non-steroidal

Topical treatment for mild-to-moderate atopic dermatitis
Atopic Dermatitis is a Prevalent and Intensely Itchy Chronic Skin Condition

- Chronic type of eczema characterized by frequent flareups of dry, itchy, inflamed skin
  - Majority of cases are mild-to-moderate
- Affects ~18M people in the U.S. (1)
  - Including ~8%-18% of infants and children
    - ~85% of cases present by the age of 5 years
- Negatively impacts quality of life
  - Itch and discomfort affect sleep
  - Sleep loss decreases school / work performance
  - Scratching often leads to secondary infections
- Due to chronic, long-term nature of disease and prevalence among children, safety is an important feature of a treatment

(1) Source: National Eczema Association
# Current Rx Treatments Used to Treat Mild-to-Moderate Atopic Dermatitis

<table>
<thead>
<tr>
<th></th>
<th>Topical Corticosteroids</th>
<th>Topical Calcineurin Inhibitors (Protopic and Elidel)</th>
</tr>
</thead>
</table>
| **Recommended Use** | • Not for long-term use  
• Most not approved for children under 2 years  
• High potency steroids should be avoided in high risk areas such as face or skin folds | • 2nd line therapy  
• Short-term and non-continuous chronic treatment  
• Patients >2 years who failed to respond to other treatments |
| **Safety**       | • Local side effects  
  – Skin thinning, acne, stretch marks  
  • Systemic side effects  
  – HPA axis suppression | • Black Box warnings for skin malignancy and lymphoma |
Past Success of Protopic and Elidel Support
Opportunity for Steroid Alternative to Treat
Atopic Dermatitis

Since FDA’s Black Box recommendation, total U.S. prescriptions for Protopic and Elidel have declined ~80%
Our Solution for Mild-to-Moderate Atopic Dermatitis

**Effectiveness**
- 4 clinical studies have demonstrated a promising efficacy profile treating patients with mild-to-moderate atopic dermatitis

**Safety**
- Topical application results in low systemic exposure
- Multiple studies conducted to date demonstrate a promising safety profile

**AN2728**

*Target Product Profile*
- Effective
- Safe
- Non-steroidal

*Topical treatment for mild-to-moderate atopic dermatitis*

**Unique Mechanism of Action**
- Topical PDE-4 inhibitor reduces production of pro-inflammatory cytokines thought to be associated with atopic dermatitis
## Overview of AN2728 Clinical Studies in Mild-to-Moderate Atopic Dermatitis

### Patients

<table>
<thead>
<tr>
<th>Study</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-202  (Dec 2011)</td>
<td>25 Adults with 10%-35% BSA affected</td>
</tr>
<tr>
<td>AD-203  (Dec 2012)</td>
<td>23 Adolescents with &gt;10% BSA affected</td>
</tr>
<tr>
<td>AD-204  (Mar 2013)</td>
<td>86 Adolescents with &gt;25% BSA affected</td>
</tr>
<tr>
<td>AD-102  (Nov 2013)</td>
<td>34 Children with &gt;5% BSA affected</td>
</tr>
<tr>
<td>Pivotal Phase 3 (Initiated 1Q14)</td>
<td>1,500 subjects ages 2 years and up with &gt;5% BSA affected</td>
</tr>
</tbody>
</table>

### Design

- **Bilateral**
- **Double-blind**
- **Vehicle-controlled**

### Key endpoint after 28 days of BID treatment

<table>
<thead>
<tr>
<th>Study</th>
<th>Endpoint Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-202  (Dec 2011)</td>
<td>% of lesions achieving Total or Partial Clearance (ADSI)</td>
</tr>
<tr>
<td>AD-203  (Dec 2012)</td>
<td>% of patients achieving Clear or Almost Clear with ≥ 2-grade improvement (ISGA)</td>
</tr>
<tr>
<td>AD-204  (Mar 2013)</td>
<td>% of lesions treated with AN2728, 2% BID achieving Total or Partial Clearance (ADSI)</td>
</tr>
<tr>
<td>AD-102  (Nov 2013)</td>
<td>% of patients achieving Clear or Almost Clear with ≥ 2-grade improvement (ISGA)</td>
</tr>
<tr>
<td>Pivotal Phase 3 (Initiated 1Q14)</td>
<td>% of patients achieving Clear or Almost Clear with ≥ 2-grade improvement (ISGA)</td>
</tr>
</tbody>
</table>

### Result

<table>
<thead>
<tr>
<th>Study</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-202  (Dec 2011)</td>
<td>52% active vs. 16% for vehicle (p=0.0027)</td>
</tr>
<tr>
<td>AD-203  (Dec 2012)</td>
<td>35%</td>
</tr>
<tr>
<td>AD-204  (Mar 2013)</td>
<td>62%</td>
</tr>
<tr>
<td>AD-102  (Nov 2013)</td>
<td>47.1%</td>
</tr>
<tr>
<td>Pivotal Phase 3 (Initiated 1Q14)</td>
<td>Data expected 2H15</td>
</tr>
</tbody>
</table>
**AD-102 MUSE Study: At Day 29, 65% of Subjects Achieved ISGA Score of “Clear” or “Almost Clear”**

- Whole-body MUSE study in patients 2 – 18 years with mild-to-moderate atopic dermatitis affecting ≥25% body surface area
- 34 patients treated all of their atopic dermatitis with AN2728, BID for 4 weeks
- Lesion severity assessed using ISGA

---

**Study Day**

<table>
<thead>
<tr>
<th>Study Day</th>
<th>% of Patients Achieving “Clear” or “Almost Clear” on ISGA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- Patients Achieving “Clear” or “Almost Clear” on ISGA
- Patients Achieving “Clear” or “Almost Clear” with ≥2-Grade Improvement on ISGA
AD-102: Of Subjects Achieving “Clear” or “Almost Clear” with ≥2-Grade Improvement, % of Subjects Achieving “Clear” Increased Over the Treatment Period

Almost Clear (ISGA=1) with ≥2 grade improvement

Clear (ISGA=0) with ≥2 grade improvement
AD-102: Subjects Showed Marked Reduction in All of The Individual Symptoms of Atopic Dermatitis

Severity Score
(ADSI)
0 = None
1 = Mild
2 = Moderate
3 = Severe

Average Improvement at Day 29

62% Pruritus
62% Erythema
57% Lichenification
55% Excoriation
62% Exudation
### Comparison of AN2728 Studies with Recently Approved Topicals for Mild-to-Moderate Atopic Dermatitis

**Note:** Caution is needed when comparing AN2728’s open-label data with randomized, controlled Phase 3 data for Elidel and Desonate.

<table>
<thead>
<tr>
<th></th>
<th>AN2728 MUSE Study (AD-102) (study completed Nov 2013)</th>
<th>AN2728 AD-203 (study completed Dec 2012)</th>
<th>Elidel / vehicle (Topical calcineurin inhibitor approved in 2001)</th>
<th>Desonate Gel / vehicle (Topical corticosteroid approved in 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of patients treated</strong></td>
<td>34</td>
<td>23</td>
<td>267 / 136</td>
<td>425 / 157</td>
</tr>
<tr>
<td><strong>Patient Age Range</strong></td>
<td>2-17 years</td>
<td>12-17 years</td>
<td>2-17 years</td>
<td>3 mo. – 18 years</td>
</tr>
<tr>
<td><strong>Average Baseline ISGA</strong></td>
<td>2.6</td>
<td>2.4</td>
<td>2.8 (2)</td>
<td>2.5 (4)</td>
</tr>
<tr>
<td><strong>Mean Baseline BSA Affected</strong></td>
<td>48%</td>
<td>18%</td>
<td>26%</td>
<td>N/A (min 10%) (4)</td>
</tr>
<tr>
<td><strong>Dosing and Treatment Duration</strong></td>
<td>BID x 28 days</td>
<td>BID x 28 days</td>
<td>BID x 42 days</td>
<td>BID x 28 days</td>
</tr>
</tbody>
</table>

(1) Source: Elidel label unless otherwise noted
(2) Source: Elidel CDER Statistical Review
(3) Source: Desonate Gel label unless otherwise noted
(4) Source: Desonate Gel CDER Medical Review
Select Data from Separate Studies of AN2728, Elidel and Desonate

**Note:** Caution is needed when comparing AN2728’s open-label data with randomized, controlled Phase 3 data for Elidel and Desonate.

<table>
<thead>
<tr>
<th>Results at End of Treatment Period</th>
<th>AN2728 MUSE Study (AD-102)</th>
<th>AN2728 AD-203</th>
<th>Elidel / vehicle&lt;sup&gt;(1)&lt;/sup&gt;</th>
<th>Desonate Gel / vehicle&lt;sup&gt;(2)&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Patient Judged:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>“Clear” or “Almost Clear”</strong></td>
<td>65%</td>
<td>74%</td>
<td><strong>35% / 18%</strong> (Elidel Phase 3 endpoint)</td>
<td><strong>60%/33%</strong> (study 1)&lt;sup&gt;(3)&lt;/sup&gt;</td>
</tr>
<tr>
<td>(ISGA 0 or 1)</td>
<td></td>
<td></td>
<td></td>
<td><strong>54%/14%</strong> (study 2)&lt;sup&gt;(3)&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>“Clear” or “Almost Clear”</strong></td>
<td>47% (AN2728 Phase 3 endpoint)</td>
<td>35% (AN2728 Phase 3 endpoint)</td>
<td><strong>N/A</strong></td>
<td><strong>44%/14%</strong> (study 1)</td>
</tr>
<tr>
<td>with min 2-grade improvement</td>
<td></td>
<td></td>
<td></td>
<td><strong>28%/6%</strong> (study 2)</td>
</tr>
<tr>
<td><strong>“Clear”</strong> (ISGA 0)</td>
<td>35%</td>
<td>13%</td>
<td>10% / 4%</td>
<td>N/A</td>
</tr>
<tr>
<td>% of Pts with Mild or No Pruritus</td>
<td>76%</td>
<td>87%</td>
<td>57%</td>
<td>N/A</td>
</tr>
<tr>
<td>Mean % Reduction in BSA Affected</td>
<td>78%</td>
<td>55%</td>
<td>~40%-45%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(1) Source: Elidel label unless otherwise noted
(2) Source: Desonate Gel label unless otherwise noted
(3) Source: Desonate Gel CDER Medical Review
AN2728 Studies Completed to Date Support Potential Safety Profile

- Safety, tolerability and pharmacokinetics
  - No treatment-emergent serious adverse events reported in studies completed to date
  - Most common treatment-related AEs were application site reactions
    - Vast majority had a maximum severity of mild or moderate
    - Generally transient and resolved spontaneously without treatment
  - Pharmacokinetic profile
    - Overall blood levels in pediatrics and adolescents were low and were similar to those previously observed in adults after adjusting for percent BSA treated

- Completed toxicology studies suggest no issues with:
  - Genotoxicity
  - Safety pharmacology
  - Local tolerance

- Results from carcinogenicity studies expected around year-end 2014
Phase 3 Trials Initiated in March 2014 with Results Expected in 2H15

- **Phase 3 study design and outcomes**
  - Two multi-center, double-blind, placebo-controlled trials conducted in the U.S.
    - ~750 subjects per trial randomized 2:1 (active:vehicle)
  - Subjects ages 2 years and older with mild-to-moderate atopic dermatitis affecting ≥5% BSA
  - Primary efficacy endpoint at Day 29
    - ISGA of “Clear” or “Almost Clear” with ≥ 2-grade improvement from baseline
  - Secondary endpoints
    - ISGA of “Clear” or “Almost Clear” at Day 29
    - Time to treatment success
  - Safety evaluation
    - Reported adverse events, safety laboratory tests, and vital signs

- **Long-term safety study to evaluate safety of intermittent use of AN2728 for up to 12 months**
  - Subjects who complete Phase 3 trial have option to roll into long-term safety trial until ~500 subjects are enrolled
  - Subjects will undergo courses of treatment as needed under the direction of the investigator over the 6-12 month treatment period
# Anacor Summary

## Kerydin
**Topical product candidate for mild-to-moderate onychomycosis of the toenail**

**Onychomycosis**
- Affects ~30M-35M people in the U.S.\(^1\)
  - ~5M–6M patients seek treatment
    - ~2M receive Rx treatment

**Kerydin Target Product Profile**
- Novel antifungal
- In fast-drying solution
- Convenient topical application
- Expected launch in 2H14, pending FDA approval on 7/29/14 PDUFA date
- Small targeted field force can reach podiatrists and dermatologists who treat large proportion of patients

## AN2728
**Non-steroidal topical product candidate for mild-to-moderate atopic dermatitis**

**Atopic dermatitis**
- Affects ~18 million people in the U.S., including ~8%–18% of children\(^2\)
- Current treatment options include topical steroids and topical calcineurin inhibitors

**AN2728 Target Product Profile**
- Topical PDE-4 inhibitor
- To reduce inflammation and itch associated with atopic dermatitis
- Demonstrated promising safety and efficacy profile in four clinical studies
- Currently in pivotal Phase 3 clinical trials with data expected in 2H15

## Financials as of 3/31/14
- $146.7M cash, cash equivalents and investments
- $30M notes payable
- 41.9M total shares outstanding

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\(^1\) Source: Podiatry Today  \(^2\) Source: National Eczema Association
Thank you