



**The Dermatology Summit
January 12, 2014**

Safe Harbor Statement

Certain items in this presentation and other matters discussed today or answers that may be given to questions asked could constitute forward-looking statements, including statements regarding the timing of the FDA regulatory process for tavaborole, progress and timing of clinical trials, the safety and efficacy of our product candidates, our collaborators, and estimates of the potential markets for our products. Additional risks and uncertainties are described more fully in Anacor's Annual Report on Form 10-K for the year ended December 31, 2012 and subsequent quarterly reports filed on Form 10-Q filed with the Securities and Exchange Commission. These statements are subject to risks and uncertainties relating to Anacor's future financial or business performance. Anacor's actual results or achievements could differ materially from those anticipated in these forward-looking statements. Please note that Anacor is under no obligation to update any of the forward-looking statements discussed today except as required by law.

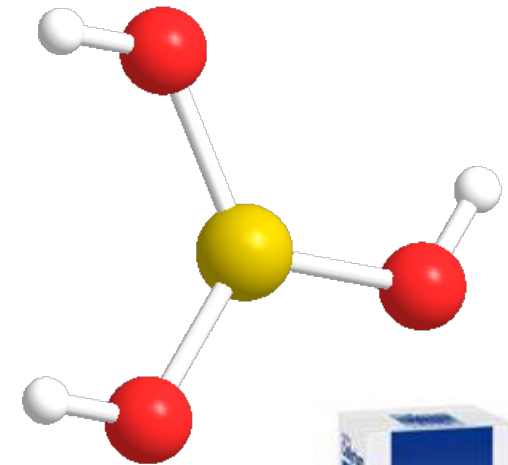


A Biopharmaceutical Company
Developing Multiple Drug Candidates
Using Novel and Proprietary
Boron Chemistry

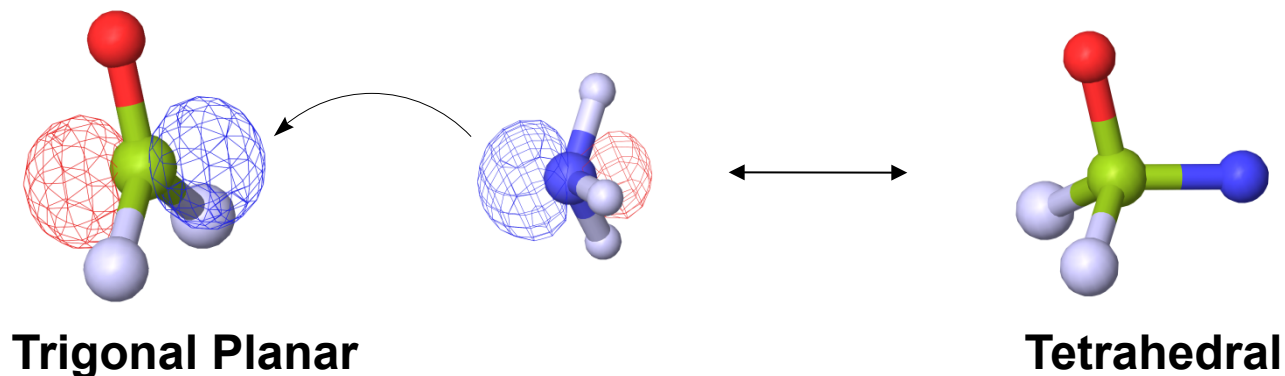


Key Facts

- In nature, boron is present as boric acid
- Boron is an essential plant nutrient
- We consume up to 4 mg of boron a day, primarily from fruits, vegetables and nuts.
- Boric acid is nontoxic has an LD₅₀ similar to regular table salt (~3000 mg/kg)



Boron has Unique Bonding Potential due to an Empty P-Orbital



- Boron has an empty P-orbital & can form a new bond under specific conditions
- The new bond forms a tetrahedral structure
- Exploitation of P-Orbital Expands Drug Design Possibilities

Our Boron Chemistry Platform: Highly Productive

Boron's Attributes

- Enhanced reactivity
 - Hits targets difficult to reach with carbon chemistry
- Unique geometry
 - Allows interaction with targets in novel ways

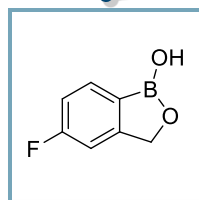
Boron's Advantages

- Access to novel biological targets
- Broad utility across multiple disease areas
- Unencumbered IP landscape

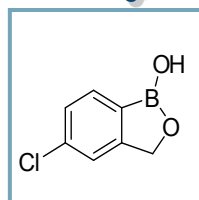
Anacor's Competitive Advantage

- Broad boron patent estate
- Know-how to optimize boron's reactivity
- Rapid and efficient synthesis of drug-like compounds

Proprietary and Novel Development Candidates

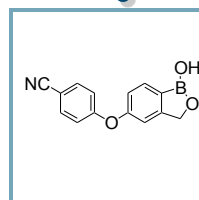


Tavaborole

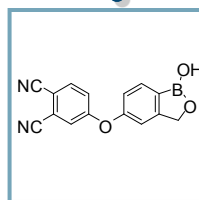


AN2718

Onychomycosis

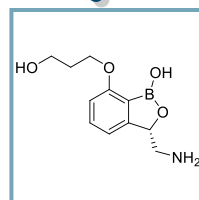


AN2728



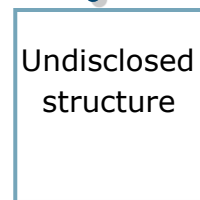
AN2898

Atopic dermatitis and psoriasis

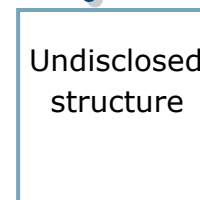


AN3365

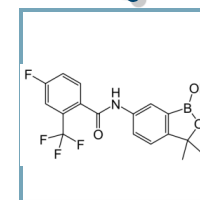
Gram-negative antibiotic



Animal health



Tuberculosis



AN5568

Sleeping sickness

Deep Pipeline of Proprietary Drug Candidates

UPCOMING MILESTONES

<i>Anacor Owned</i>	Phase 1	Phase 2	Phase 3	1H14	2H14	1H15
Tavaborole (topical anti-fungal) Onychomycosis			NDA accepted		<ul style="list-style-type: none"> 7/29/14 PDUFA date Launch tavaborole in the US 	
AN2728 (topical anti-inflammatory) Atopic Dermatitis <i>(lead indication)</i> Psoriasis			3 Ph 2 studies completed Ph 3 ready	<ul style="list-style-type: none"> End of Phase 2 Meeting with FDA Initiate Phase 3 trials in atopic dermatitis 		<ul style="list-style-type: none"> Results from Phase 3 trials in atopic dermatitis
AN3365 (gram-negative antibiotic)				<ul style="list-style-type: none"> Determine next steps in development 		
<i>Partnered</i> Animal Health			<i>Lilly</i>			<ul style="list-style-type: none"> Protocol concurrence expected in 2H15
AN5568 (HAT/Sleeping Sickness)			<i>DNDi</i>	<ul style="list-style-type: none"> Results from Phase 1 study 	<ul style="list-style-type: none"> Initiate Phase 2/3 study 	

Tavaborole for Onychomycosis

Safe

- Local, targeted therapy
- Little or no detectable systemic exposure
- All preclinical toxicology completed

Effective

- Potent against broad spectrum of fungi and yeast
- Unique MOA - targets LeuRS to kill fungus
- Demonstrated efficacy superior to Penlac in first Phase 3 study

Tavaborole

A safe, effective and easy to use topical treatment for onychomycosis that is more effective than current topical options and safer than current oral therapeutics

Penetrates Nail

- Small molecular weight
 - 152 Da compared to > 300 Da for most antifungals
- Balanced preference for oil and water (logP = 1.24)
- Water soluble (0.8 mg/mL)
- Activity in presence of keratin

Easy to Use

- Apply with dropper once daily
- Dries in about one minute
- No special cleansing or preparation prior to application

AN2728 for Mild-to-Moderate Atopic Dermatitis



Safe

- Topical application limits systemic exposure
- 16 clinical studies to date demonstrate a promising safety profile

Effective

- Target product profile - efficacy equal to topical calcineurin inhibitors
- Three Phase 2 studies have demonstrated efficacy treating adults and adolescents with atopic dermatitis

AN2728

*Topical Anti-inflammatory
for Atopic Dermatitis*

Unique Mechanism of Action

- Boron-based compound
- Inhibits PDE4
 - Reduces production of pro-inflammatory cytokines thought to be associated with atopic dermatitis