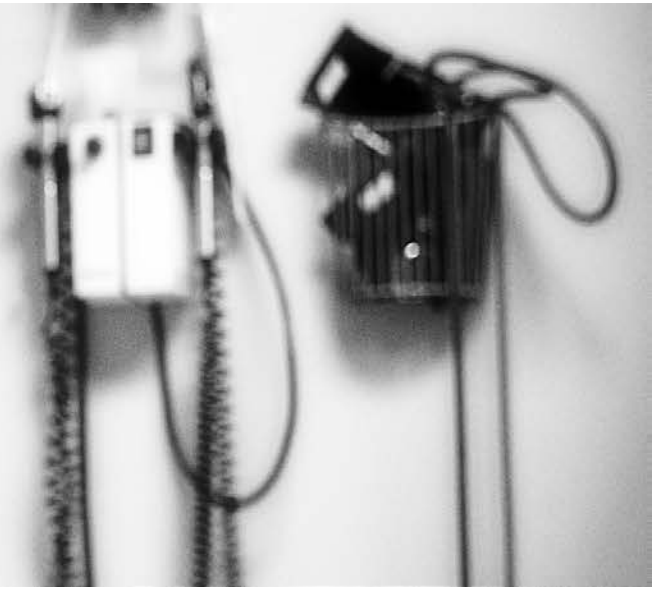
biota®

Leader in Antiviral Drug Development



January 2015

Safe Harbor

This presentation contains forward-looking statements about Biota Pharmaceuticals, Inc. and its business, business prospects, strategy and plans, including but not limited to statements regarding anticipated preclinical and clinical drug development activities and timelines and market opportunities. All statements other than statements of historical facts included in this presentation are forward looking statements. The words “anticipates,” “may,” “can,” “plans,” “believes,” “estimates,” “expects,” “projects,” “intends,” “likely,” “will,” “should,” “to be,” and any similar expressions or other words of similar meaning are intended to identify those assertions as forward-looking statements. These forward-looking statements involve substantial risks and uncertainties that could cause actual results to differ materially from those anticipated. Factors that may cause actual results to differ materially from such forward-looking statements include those identified under the caption “Risk Factors” in the documents filed by Biota Pharmaceuticals with the Securities and Exchange Commission from time to time, including its Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this presentation. Except to the extent required by applicable law or regulation, Biota Pharmaceuticals undertakes no obligation to update the forward-looking statements included in this presentation to reflect subsequent events or circumstances.

Company Overview

- Developing products to treat serious and potentially life-threatening viral infections
- Vapendavir to treat human rhinovirus (HRV) infected patients with underlying respiratory illnesses
  - Phase 2b SPIRITUS trial in moderate to severe asthmatics to initiate this quarter
- BTA-C585 to treat respiratory syncytial virus (RSV) infections in pediatrics, immunocompromised and adults with cardiac and pulmonary disease
  - Conducting IND-enabling studies and planning to initiate a Phase 1 trial in mid-2015
- Laninamivir octanoate in late-stage development for the treatment of influenza A & B
  - Partnering activities on-going for Phase 3 trials and commercialization outside of Japan
- Ongoing royalty stream from two approved neuraminidase inhibitors
- Clinically-focused, data-driven and proven management team
- Well capitalized to execute strategic plan

Robust Antiviral Pipeline

	Preclinical	Phase I	Phase II	Phase III	Marketed	Commercial Partner
Zanamivir (Relenza®)[1] Influenza A&B	*Treatment & Prophylaxis*					
Laninamivir Octanoate (Inavir®) – Japan[2] - Influenza A&B	*Treatment & Prophylaxis*					Daiichi-Sankyo
Laninamivir Octanoate (LANI) - U.S./ROW - Influenza A&B	*Treatment*					
Vapendavir (BTA-798) - Human rhinovirus (HRV)	*Treatment*					
BTA-C585 - Respiratory syncytial virus	*Treatment*					

[1]7-10% royalty on global net sales
[2]4% royalty on net sales in Japan

Vapendavir (BTA-798)
Capsid Inhibitor

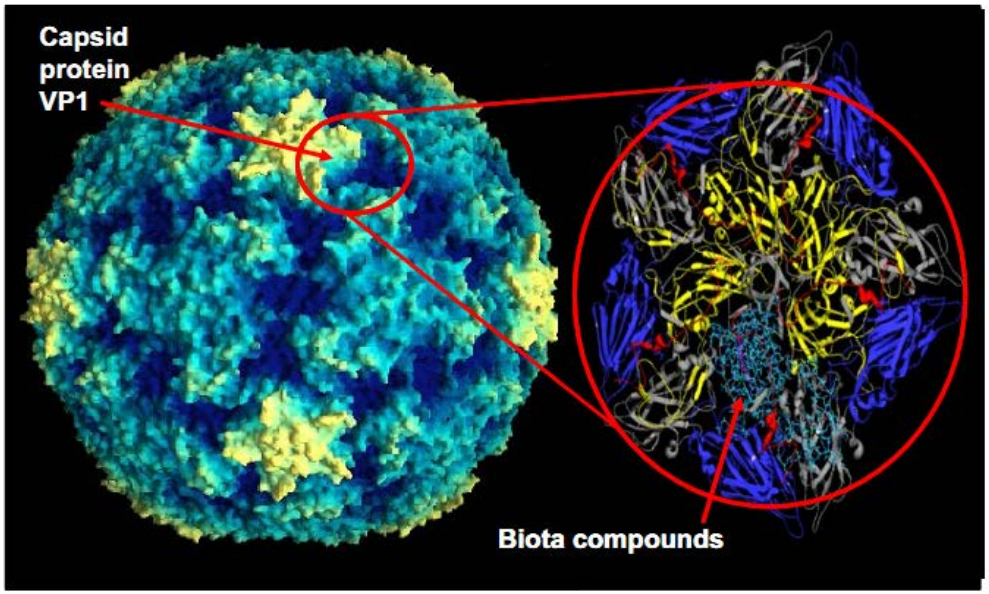


Figure 5-1 Structural representation of Rhinovirus and the area of capsid to which vapendavir binds.

Vapendavir Opportunity

- Potent, orally bioavailable broad spectrum enterovirus antiviral
  - Activity against human rhinovirus (100 nM), Coxsackie A9 (400 nM), Echovirus 9 (3 nM), Enterovirus-71 (200 nM), and Polio virus type 3 (20 nM)
- Significant market opportunity
  - Annual economic impact of non-influenza upper respiratory infections is estimated to be $40 billion in the U.S.
  - Addressing patients with moderate to severe asthma, COPD and compromised immune systems (chemotherapy, transplants)
- Phase 2a human rhinovirus (HRV) challenge study successfully demonstrated proof-of-concept in healthy adults
  - Prophylaxis with vapendavir demonstrated a dose-dependent decrease in the percent of culture confirmed HRV infected subjects compared to placebo (p=0.02)
- Phase 2 trial in patients with mild asthma successfully met primary endpoint

Treatment of HRV Infections Patients with Underlying Respiratory Illnesses Represent a Significant U.S. Market Opportunity

Risk Group*	Total Prevalence*	1.3 Colds Per Year#
Intermittent Asthma	10,420,000	13,962,800
Mild Persistent Asthma	3,877,000	5,195,180
Moderate Persistent Asthma	5,331,000	7,143,540
Severe Persistent Asthma	4,604,000	6,169,360
Mild COPD	15,319,000	20,527,460
Moderate COPD	10,457,000	14,012,380
Severe/Very Severe COPD	2,333,000	3,126,220
TOTAL	52,341,000	70,136,940

*DataMonitor, 2012 – Asthma Epidemiology
*DataMonitor, 2011 – Chronic Obstructive Pulmonary Disease: Epidemiology Forecast
#Hurst, JR – *Eur Respir J* 26:846-852, 2014

Vapendavir: Positive Phase 2 Rhino Study Results

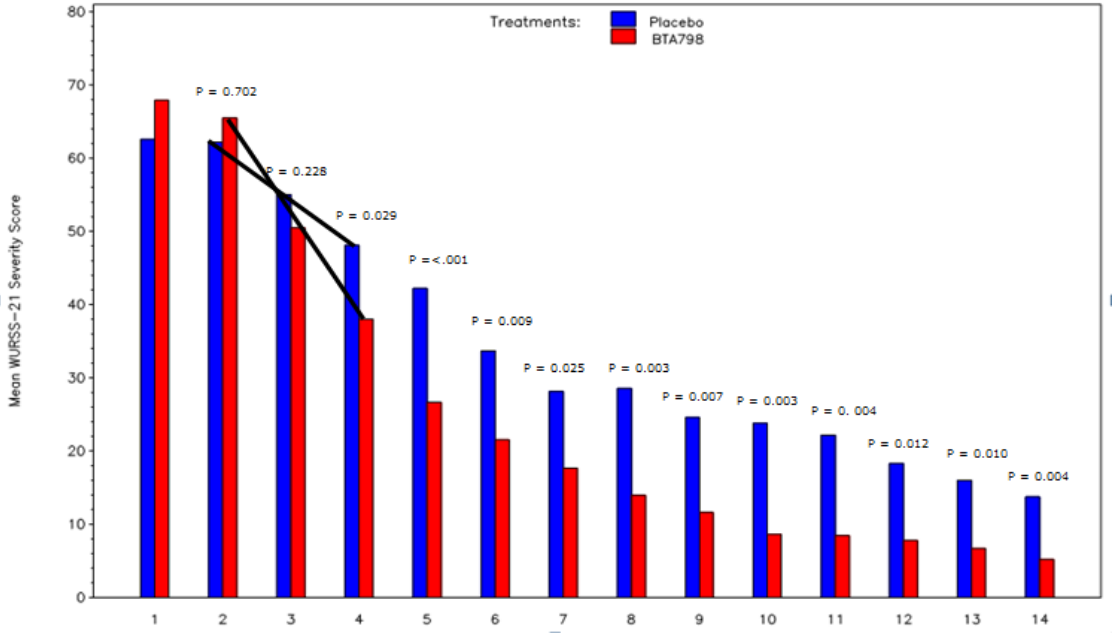
- Phase 2 Multicenter, Randomized, Double-Blind, Placebo-Controlled Study in Asthmatic Adults with Symptomatic Human Rhinovirus Infection
  - 400 mg *bid* X 6 days
  - Primary efficacy endpoint utilized the Wisconsin Upper Respiratory Symptom Survey-21 (WURSS-21)
    - Illness-specific health-related quality-of-life questionnaire outcomes instrument
- ITT-I population (HRV PCR +) for efficacy analysis (Placebo N=51, Vapendavir N=42)
  - Statistically significant reduction in the WURSS-21 severity score (ITT-I; $p<0.02$) over days 2-4 (primary efficacy endpoint)
  - Vapendavir treatment resulted in a least square mean difference (reduction) in Asthma Control Questionnaire (ACQ-5) score at day 14 *vs* placebo (ITT-I; $p=0.08$)
  - Daily $\beta 2$ agonist use (# of puffs) over days 1-14 reduced in the vapendavir treated cohort *vs* placebo (ITT-I; $p=0.09$)
- Favorable safety profile among 263 unique subjects
  - No serious adverse events (SAE) in vapendavir arm, 1 in placebo
  - Most common adverse events (<5%) included headache, URI, sinusitis, bronchitis, nausea, diarrhea and pyrexia

Vapendavir: Positive Phase 2 Rhino Study Results

- Statistically significant differences in the mean daily difference in WURSS-21 severity score in the vapendavir treated cohort *vs* placebo (ITT-I)
  - Days 2-4 (p=0.02)*
  - Days 2-5 (p=0.001)
  - Days 2-14 (p=0.001)

*Primary endpoint

rhino study

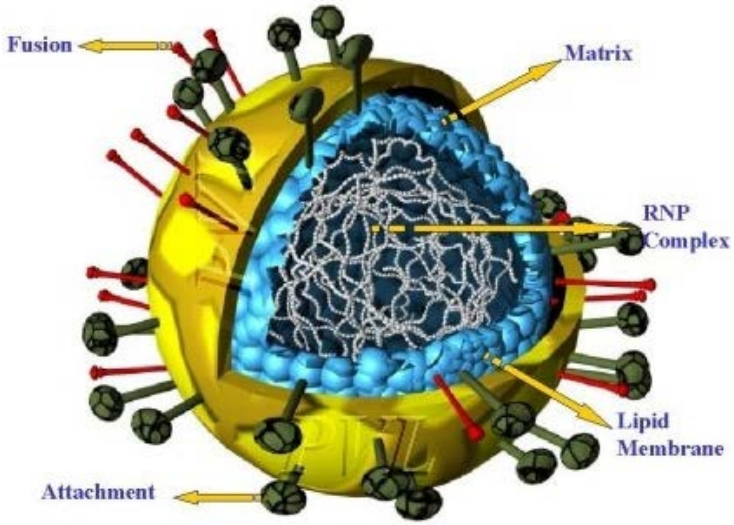


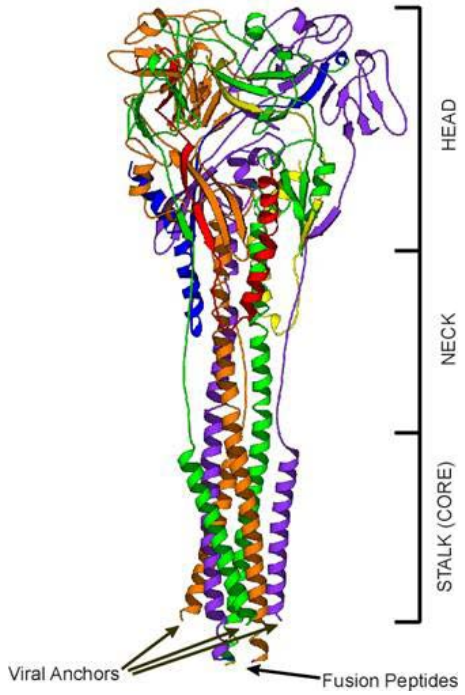
Vapendavir Phase 2b Trial

- SPIRITUS Trial - Phase 2, Multi-center, Randomized, Double-blind, Placebo-controlled Dose-ranging Study in Moderate to Severe Asthmatic Adults with Symptomatic Human Rhinovirus (HRV) Infection
  - 300-400 randomized moderate and severe asthma subjects, aged 18-70, with a history of asthma worsening or exacerbation in the last 14 months due to presumed viral respiratory infections that required asthma rescue medication treatment
    - Asthma subjects will be currently taking at least medium-dose or high-dose inhaled corticosteroids defined as fluticasone at a dosage of at least 264 µg daily
    - Targeting 50 HRV PCR (+) subjects per arm
  - 300 mg or 600 mg vapendavir (*bid*), or placebo for 7 days
  - Primary endpoint - Least Square (LS) mean change from baseline to study day 14 in ACQ-6 total score
  - Secondary endpoints - safety and tolerability, Wisconsin Upper Respiratory Symptom Survey-21 (WURSS-21), incidence of asthma exacerbations, FEV_1, and viral load

BTA-C585

RSV Fusion Inhibitor





Significant U.S. Market Opportunity to Treat RSV Infections

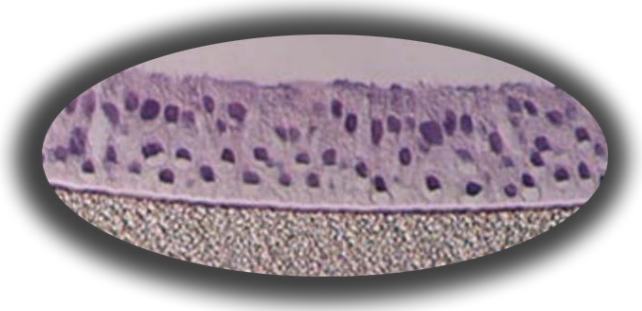
Risk Group	Total Prevalence	RSV Infected	Hospitalized due to RSV Infection	RSV Infected but not Hospitalized
Elderly (>65 years of age and older)	37,196,000	1,766,810		
Adults with underlying pulmonary or cardiac disease	22,929,000	1,490,385	223,400	3,033,795
Children (<4 years of age)	20,639,000	4,540,580	127,136	4,413,444
Premature Infants	527,000	210,800	52,700	158,100
Bone Marrow Transplants	4,000	400	400	0
TOTAL	**81,295,000**	**8,008,975**	**403,636**	**7,605,339**

BTA-C585 Compares Favorably to Other Clinical Stage RSV Fusion Inhibitors

Cell Cytotoxicity (CC_{50} μm)						
	HEp-2	Cardiomyocytes	MT-4	Huh-7	HepG2	Vero
BTA-C585	>20^	>100	NT	>100	>100	>100
GS-5806*	48.9	NT	18.6	13.0	17.6	NT

^Highest dose tested

Antiviral Activity Against RSV A2 in Primary Human Lung Airway Epithelium	
	EC_{50} (nM)
BTA-C585	8.4
GS-5806*	0.37
VP-14637 (MDT-637)	6.9

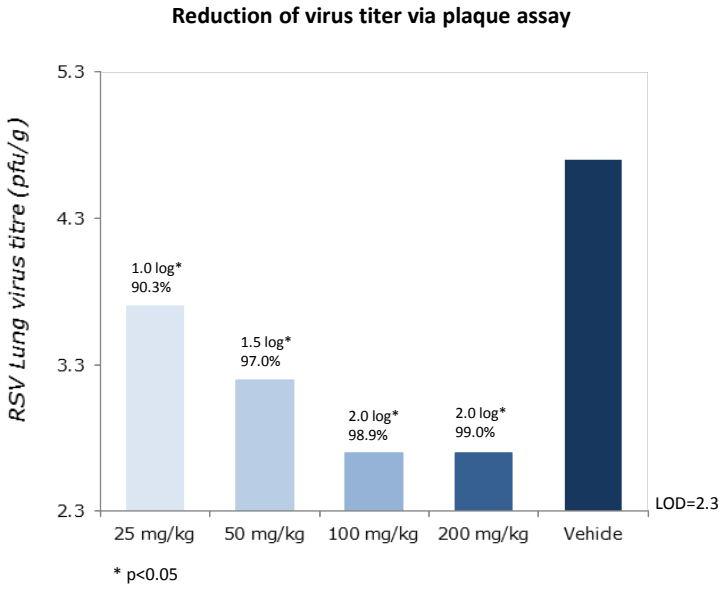


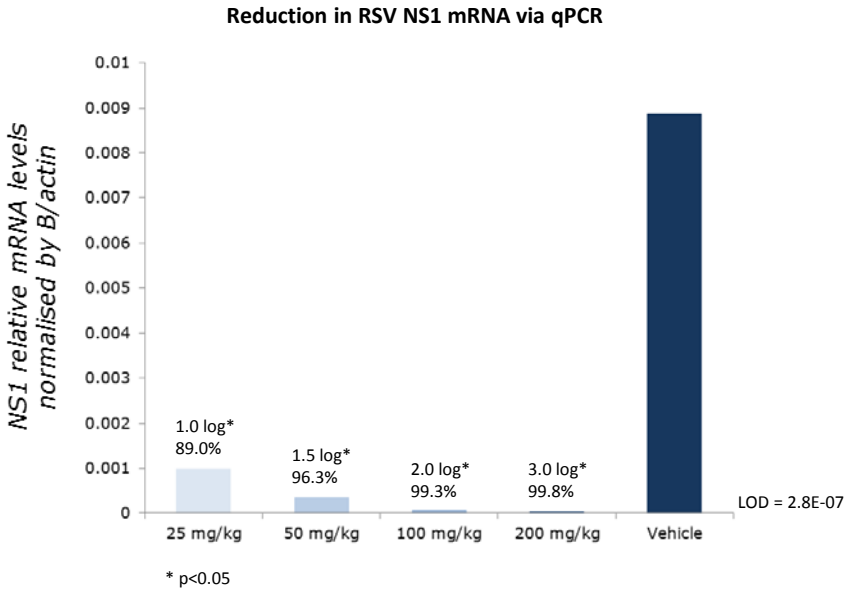
EpiAirway Tissue Model

*2014 ICAAC Poster V-1814; Perron, M. et al.

BTA-C585 Demonstrated Robust Antiviral Activity in Preclinical Model*

- Compounds dosed @ 25, 50, 100, 250 mg/kg, -2h + BID, inoculated intranasally with 10^4 pfu RSV A/Long
- Lungs harvested at peak infection - 4 days
  - Infectious virus measured by plaque assay and qPCR

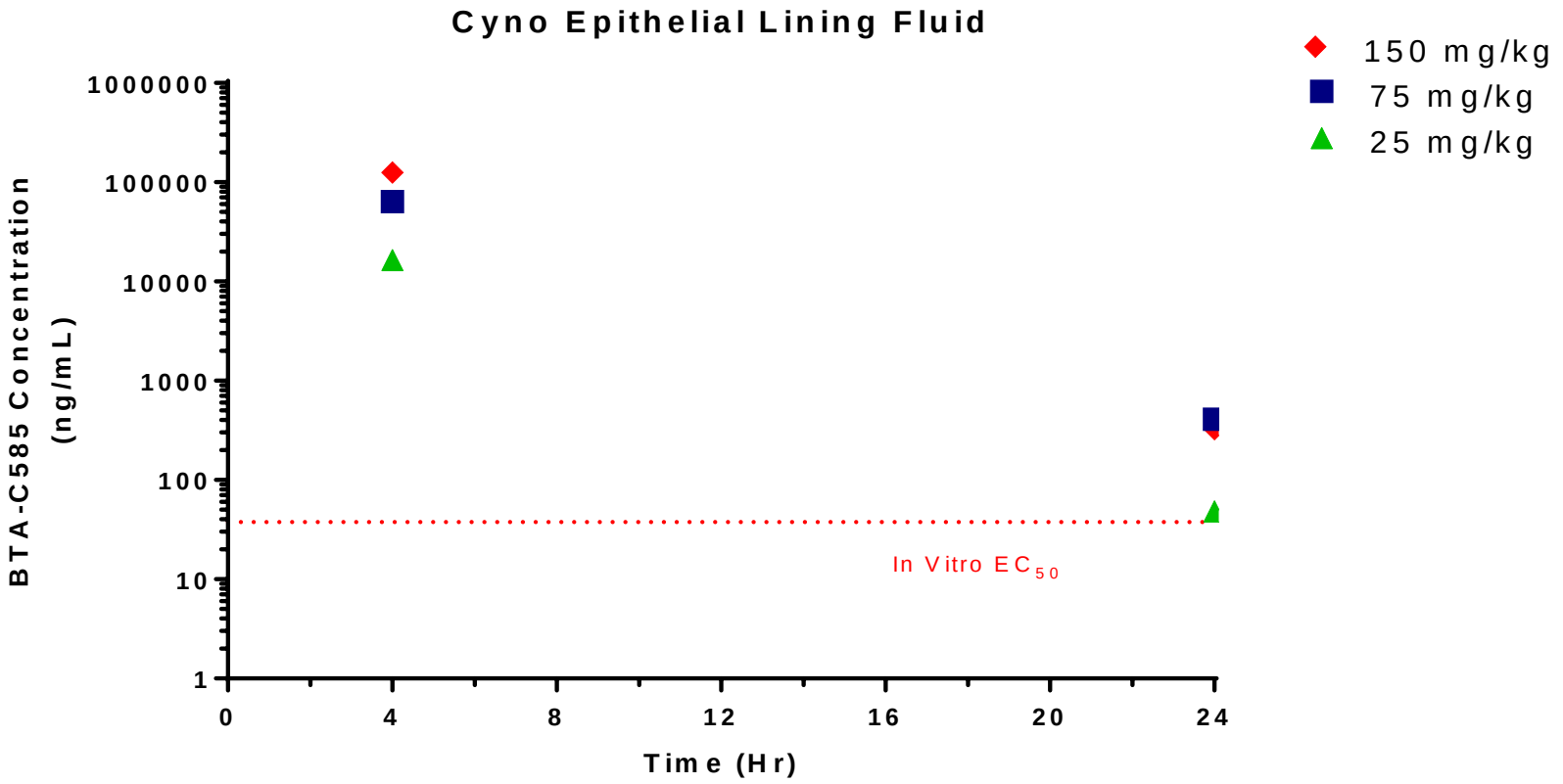




- Results
  - 1.0 - 2.0 log reduction of virus titres at 25-200 mg/kg by plaque assay
  - 1.0 - 3.0 log reduction 25-200 mg/kg by qPCR

*Presented at the 2014 ICAAC Meeting

BTA-C585 Achieves Antiviral Levels in Lung Epithelial Lining Fluid Following Oral Dosing



Laninamivir Octanoate

Long-Acting Neuraminidase Inhibitor (LANI)

Laninamivir Octanoate (LANI) Overview

- Next generation member of ~~a~~ clinically-proven class of influenza antivirals (neuraminidase inhibitors)
  - "One and done" single inhaled therapeutic dose
- Simple to use dry powder inhaler (TwinCaps® DPI)
- Potent, direct-acting antiviral
  - Potent inhibitor of influenza neuraminidases and associated viruses including highly pathogenic avian influenza
- Favorable resistance profile
  - Active against clinically relevant oseltamivir and peramivir resistant viruses (H1N1; H275Y)
- Substantial amount of preclinical, clinical and commercial data supporting efficacy and safety

Inavir® – Leading Influenza Antiviral Marketed in Japan

- Daiichi-Sankyo markets LANI (Inavir®) for the treatment and prevention of influenza A & B in Japan
  - Treatment: 40 mg adults; 20 mg children less than 10 years old
  - Prophylaxis: 2 x 20 mg adults and children over 10 years of age
- Favorable competitive profile has resulted in Inavir® becoming the market leading neuraminidase inhibitor in Japan in less than 3 years
  - >45% market share achieved in the seasonal market in 2013/2014
  - >10 million courses since product launch in 2010

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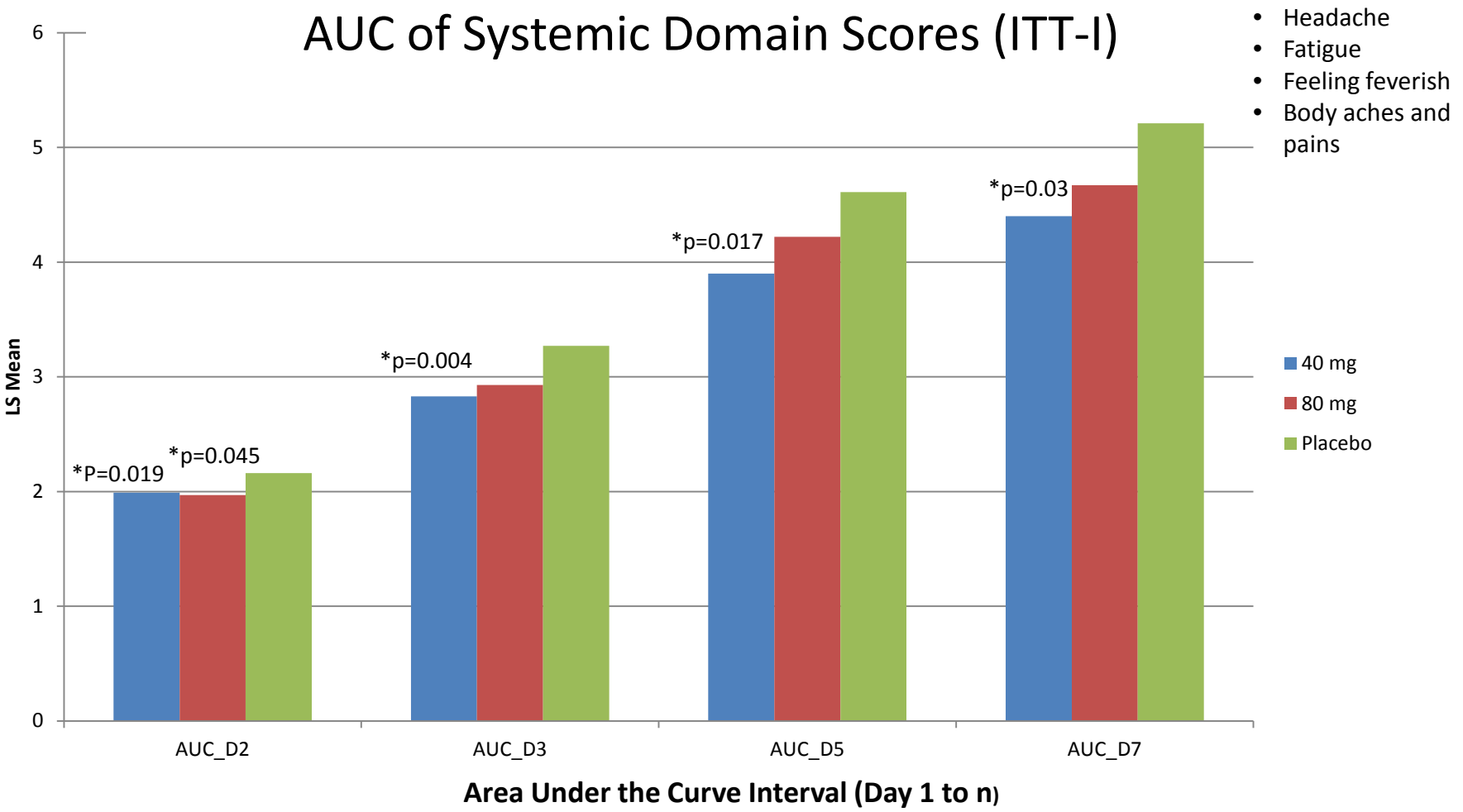
IGLOO Trial Results Demonstrated a Reduction in Systemic Symptoms and Rapid Antiviral Activity

- Phase 2 Randomized, Double Blind, Placebo Controlled, Parallel Arm Study to **I**nvesti**g**ate the Efficacy and Safety of Inhaled **L**aninamivir **O**ctan**o**ate TwinCaps® Dry Powder Inhaler in Adults with Symptomatic Influenza A or B Infection **(IGLOO)**
  - 40 mg (N=67) or 80 mg (N=75) dose did not achieve a statistically significance difference in median time to alleviation of all seven symptoms and fever collected with Flu-iiQ PRO questionnaire vs placebo (N=89)
  - 40 mg cohort reported alleviation of systemic symptoms significantly earlier than placebo (median time 59 hours and 79 hours, respectively, p=0.029)
  - A statistically significant proportion of patients in both the 40 mg (p=0.002) and 80 mg (p=0.02) cohorts were culture negative on Day 3 of the study as compared to placebo
  - Patients in 40 mg (p<0.001) cohort demonstrated a statistically significant reduction in viral shedding on Day 3 vs placebo as quantified by qRT-PCR
  - 40 mg cohort reported fewer secondary bacterial infections (p=0.013) vs placebo

LANI Significantly Reduced Duration and Severity of Systemic Symptoms



Post-Hoc Analysis - (ANCOVA) model with fixed effects for treatment, geographical region and baseline standardized symptom score and time since onset as covariates

Milestones for 2015 - 2016

	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Vapendavir (HRV)	Initiate SPIRITUS Phase 2b asthma trial					SPIRITUS Phase 2b data readout		
BTA-C585 (RSV)	Complete IND-enabling studies	File IND	Initiate Phase 1 trial	Phase 1 data	Initiate Phase 2a		Phase 2a data readout	
Laninamivir (Influenza)	Partnering Activities							

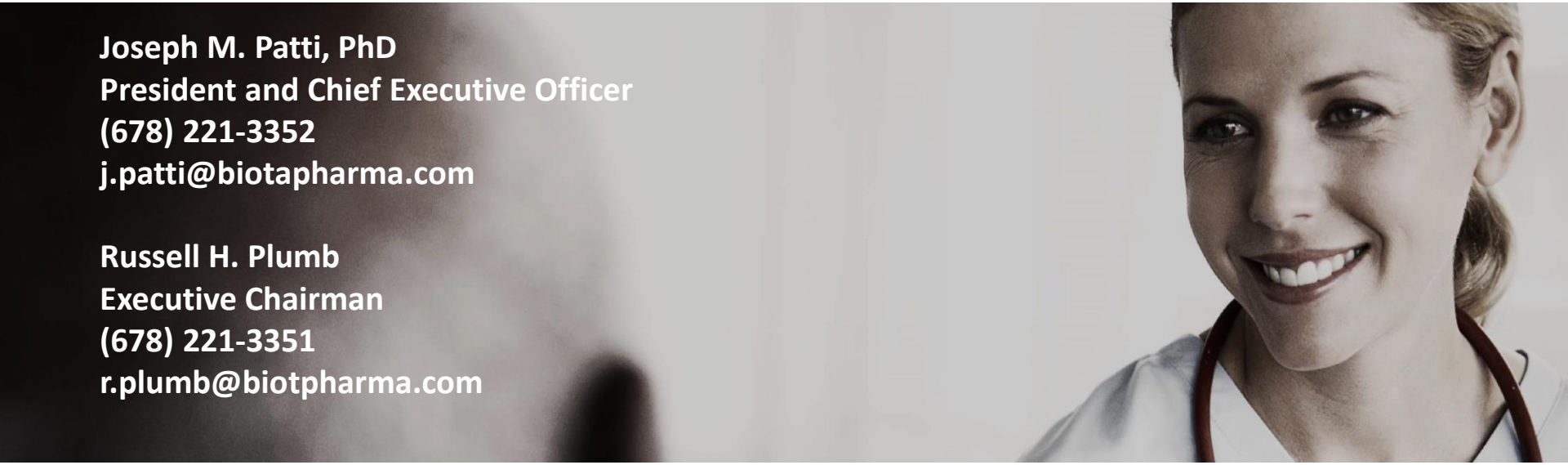
Financial Strength for Effective Execution

	Sept 30, 2014
NASDAQ Symbol	BOTA
Commons Shares Outstanding (primary)	35. 1M
Cash and short-term investments	$76.1M

Focused Corporate Organization & Strategy

- Management team and Board of Directors have a proven track record of creating significant shareholder value
- Advance Vapendavir and BTA-C585 into clinical trials this quarter and in 3Q 2015, respectively
- Continued alignment of internal overhead costs with anticipated royalty revenues
- Active corporate development initiatives to complement current antiviral pipeline to accelerate and enhance shareholder value creation
- Continue partnering activities with LANI for Phase 3 development and commercialization outside of Japan

Contact Info



Joseph M. Patti, PhD
President and Chief Executive Officer
(678) 221-3352
j.patti@biotapharma.com

Russell H. Plumb
Executive Chairman
(678) 221-3351
r.plumb@biotpharma.com