Theravance® Biopharma®

Medicines That Make a Difference®

Theravance Biopharma, Inc. (NASDAQ: TBPH)

Investor Presentation

May 2018

Cautionary Statement Regarding Forward-Looking Statements

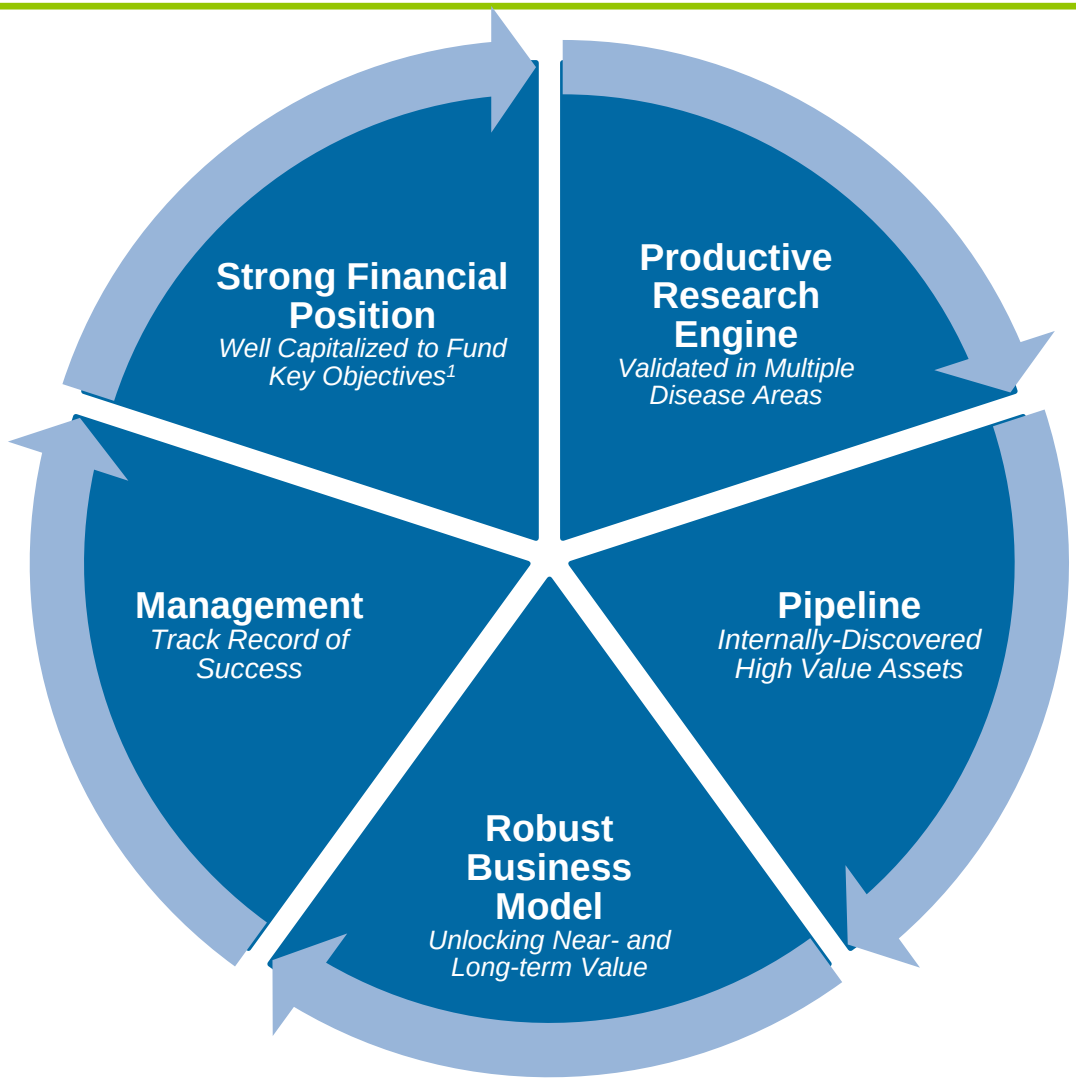
Under the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995, the company cautions investors that any forward-looking statements or projections made by the company are subject to risks and uncertainties that may cause actual results to differ materially from the forward-looking statements or projections.

Examples of forward-looking statements in this presentation include statements relating to the company's business plans and objectives, including financial and operating results, potential partnering transactions and sales targets, the company's regulatory strategies and timing and results of clinical studies, the potential benefits and mechanisms of action of the company's product and product candidates (including their potential as components of combination therapies).

The company's forward-looking statements are based on the estimates and assumptions of management as of the date of this presentation and are subject to risks and uncertainties that may cause the actual results to be materially different than those projected, such as risks related to delays or difficulties in commencing or completing clinical studies, the potential that results from clinical or non-clinical studies indicate product candidates are unsafe or ineffective (including when our product candidates are studied in combination with other compounds), delays or failure to achieve and maintain regulatory approvals for product candidates, risks of collaborating with third parties to discover, develop and commercialize products, risks associated with establishing and maintaining sales, marketing and distribution capabilities.

Other risks affecting the company are described under the heading "Risk Factors" and elsewhere in the company's Form 10-Q filed with the Securities and Exchange Commission (SEC) on May 9, 2018, and other periodic reports filed with the SEC.

Theravance Biopharma Investment Highlights



[1] Approximately $435M in cash, cash equivalents, and marketable securities as of 3/31/18, including upfront payment received from global collaboration with Janssen Biotech, Inc.

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Enhancing Focus on Strategic Priorities in 2018

Commitment to developing transformational medicines

Opportunities to Create Transformational Medicines	**Revefenacin**	**Nebulized LAMA in COPD (PDUFA date November 13, 2018)**
	TD-1473	**Intestinally-restricted JAK inhibitor for inflammatory intestinal diseases**
	TD-9855	**NSRI in symptomatic nOH, an orphan condition**
	Research	**Inhaled JAK inhibitor for serious respiratory diseases**
Strategic Asset	**Trelegy Ellipta**	**(FF/UMEC/VI) Single inhaler triple therapy in COPD**

Managed by GSK and Innoviva[1]

[1] Economic interest. FF/UMEC/VI= Fluticasone Furoate/Umeclidinium/Vilanterol. Innoviva formerly Theravance, Inc.

PDUFA = Prescription Drug User Fee Act. LAMA = long-acting muscarinic antagonist. JAK = Janus kinase. NSRI = norepinephrine serotonin reuptake inhibitor. nOH = neurogenic orthostatic hypotension. COPD = chronic obstructive pulmonary disease

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Economic Interests

GSK's FDA-approved Trelegy Ellipta (FF/UMEC/VI)

FF/UMEC/VI= Fluticasone Furoate/Umeclidinium/Vilanterol

GSK's Trelegy Ellipta Offers Significant Potential

First and only once-daily single inhaler triple therapy

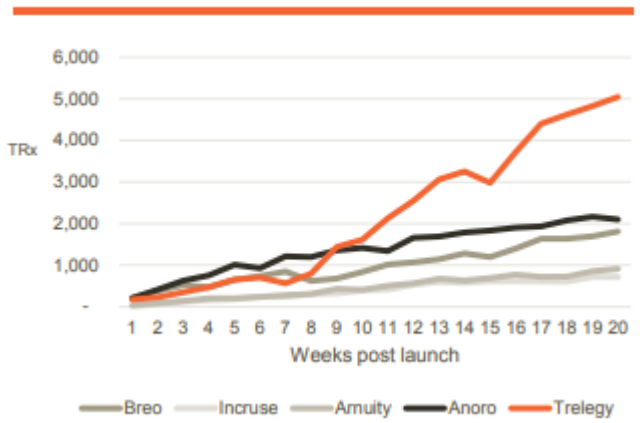
Economic interest in Trelegy Ellipta serves as an important strategic asset

- Upward-tiering royalty 5.5% - 8.5% of worldwide net sales[1]
- Passive economic interest; no product cost obligations

Program Summary

- Approved for COPD in US and EU[2]
- FF/UMEC/VI: Comprise of ICS, LAMA, and LABA, active components of Breo® (FF/VI) and Anoro® (UMEC/VI)
- Phase 3 CAPTAIN asthma study in progress

Strongest US Ellipta launch to date



Launched in US in November 2017

Source: GSK; IQVIA NPA weekly TRx data

US label expanded to include landmark IMPACT study data

- ✓ 15% reduction in annual rate of exacerbations compared with Relvar/Breo Ellipta
- ✓ 25% reduction compared with Anoro Ellipta
- ✓ Significant improvements in lung function vs. same dual therapies and improvements in SGRQ

All statements based on publically available information. Trelegy Ellipta jointly managed by GSK and Innoviva (formerly Theravance, Inc.) [1] TBPH holds 85% economic interest in upward tiering royalty stream of 6.5% – 10% payable by GSK. [2] Approved in EU for treatment of appropriate patients with COPD. ICS = Inhaled corticosteroids. LABA = long-acting beta2-adrenergic agonist. SGRQ = St. George's Respiratory Questionnaire

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JAK Inhibitor Program

Oral intestinally-restricted pan-Janus kinase (JAK) inhibitors for ulcerative colitis and other inflammatory intestinal diseases

Differentiated and Potential Breakthrough Approach to Treating Inflammatory Intestinal Disease

TD-1473 program objectives: Oral pan-JAK inhibitor that **distributes selectively** throughout the intestines to **treat inflammatory intestinal disease locally**, **with minimal systemic exposure** or corresponding immunosuppressive effects, to **enhance safety and efficacy**

Key clinical and preclinical findings to date:

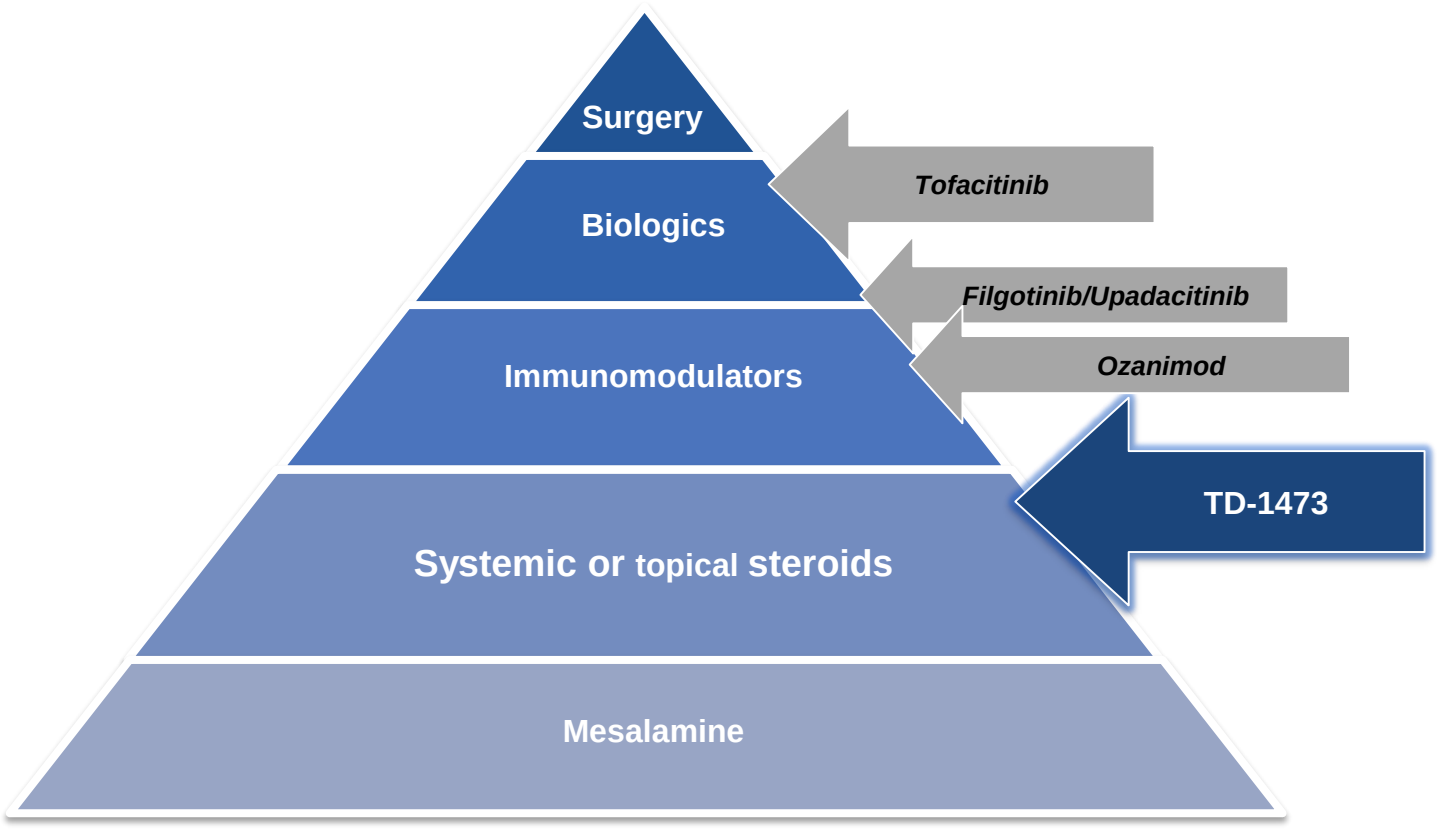
- ✓ **First cohort UC patients in Phase 1b study**
  - Data demonstrated localized biological target engagement, with minimal systemic exposure
  - Clinical responses after only 4 weeks of therapy
- ✓ **Preclinical models of UC confirmed**
  - Improvements in disease scores, local absorption and penetration of TD-1473 throughout intestinal tract
- ✓ **Phase 3 enabling toxicology complete**
  - Favorable safety margins in 6 and 9 month studies

Advancing in collaboration with Janssen: global co-development and commercialization agreement in inflammatory intestinal disease, including UC and Crohn's

UC = ulcerative colitis

Vision for TD-1473 in UC: Transform Treatment Paradigm

Safe enough for mild-moderate, effective enough for moderate-severe



* Decision Resources, Ulcerative colitis 2015; **Positioning supported by TBPH US market research (N: 20), Oct 2015

Phase 1b First Cohort Demonstrated Localized Target Engagement and Minimal Systemic Exposure

Objectives	Results from First Cohort of Patients at 80 mg	
Evaluate safety	✓	No moderate or severe AEs deemed possibly related to study drug No signal of systemic immunosuppression or changes in lipids
Confirm PK in UC patients	✓	Plasma levels consistent with healthy volunteer SAD/MAD data, minimal systemic exposure in patients
Confirm drug at site of action	✓	Relevant drug concentrations in distal colonic tissue
Evidence of target engagement by biomarkers	✓	Reduction on pSTAT1 in colonic tissue Reductions in serum CRP and fecal calprotectin
Signals of biologic activity at 4 weeks[1]	✓	7 of 10 patients on TD-1473 experienced ≥ 1-point reduction in Mayo rectal bleeding subscore, compared to 1 of 3 patients on placebo 3 of 10 patients on TD-1473 experienced ≥ 1-point reduction in Mayo endoscopic subscore, compared to zero patients on placebo ***Mucosal healing achieved in two patients*** 2 of 10 patients on TD-1473 achieved clinical response by total Mayo Score, compared to zero patients on placebo 4 of 10 patients receiving TD-1473 achieved clinical response by partial Mayo score, compared to 1 of 3 patients on placebo

Theravance Biopharma and Janssen advancing TD-1473 into larger clinical development programs on the basis of Phase 1b first cohort data

[1] Gastroenterology Vol. 148, No. 1, pages 37-51. "Converging Goals of Treatment of Inflammatory Bowel Disease From Clinical Trials and Practice." Levesque, et al. http://www.gastrojournal.org/article/S0016-5085(14)00999-8/pdf Published online August 12, 2014. Total Mayo Clinic Score (MCS) as referenced herein, with endoscopic subscore modified such that mild friability is scored as a 2 rather than a 1 (pages 39-40). Clinical response for partial MCS consistent with clinical response for MCS, except criteria for clinical response by partial MCS include a decrease in partial MCS of at least 2 points versus 3 points in the MCS criteria. Mucosal healing based on modified Mayo endoscopy score. PRO2-e = rectal bleeding, stool frequency and endoscopy components of total MCB (excludes PGA) CRP = C-Reactive Protein; pSTAT1 = phosphorylated signal transducer and activator of transcription1

Next Steps in Clinical Development of TD-1473

Advancing programs in ulcerative colitis and Crohn's in parallel

Ulcerative Colitis

Phase 2b/3 Study

- Large, adaptive design induction and maintenance study in ulcerative colitis
- Expect to initiate in 2H 2018
- Phase 2b/3 design should expedite development path
- Leveraging Janssen expertise in design and conduct

Crohn's disease

Phase 2 Study

- Expect to initiate in 2H 2018
- Crohn's timelines accelerated due to collaboration
- Enhances commercial opportunity versus going alone

All pre-clinical toxicology studies enabling next phase of development complete

Global Collaboration Agreement for TD-1473

Potential to maximize value of TD-1473 for Theravance Biopharma

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janssen | PHARMACEUTICAL COMPANIES OF Johnson & Johnson

- Shared belief in TD-1473 as a localized medicine with potential to transform the treatment landscape in inflammatory intestinal disease
- Meaningful program enhancements for TD-1473
  - Accelerate clinical development; plan to advance UC and Crohn's in parallel
  - Apply Janssen expertise in IBD to optimize clinical strategy and execution
  - Maximize worldwide commercial opportunity of TD-1473
- Attractive deal economics reducing overall financial risk

Collaboration represents important milestone for TD-1473, the value of our internally discovered pipeline, and our strategy to design localized medicines to help improve the lives of patients

Key Terms of TD-1473 Collaboration with Janssen

- **Significant economics** reflective of the potential value of TD-1473
  - Up to $1B in payments to Theravance Biopharma, including $100M upfront
    - *$200M fee following completion of Phase 2 Crohn's study and Phase 2b induction portion of UC study, if Janssen elects to enter into exclusive license*
    - *Up to $700M in potential development and commercialization milestones*
  - Profit share structure for US commercialization and Phase 3 program expenses
    - *67% Janssen / 33% Theravance Biopharma*
  - Double digit tiered royalties ex-US
- **Leveraging joint expertise** in clinical development
  - Janssen would lead development in Phase 3 Crohn's program
  - Theravance Biopharma will lead completion of Phase 2b/3 UC study
- If approved, Theravance Biopharma may elect to **co-commercialize in US** under profit share; Janssen solely responsible for TD-1473 commercialization ex-US

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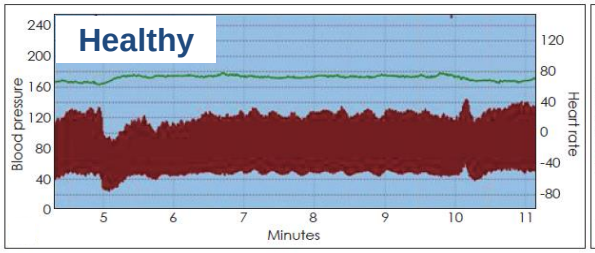
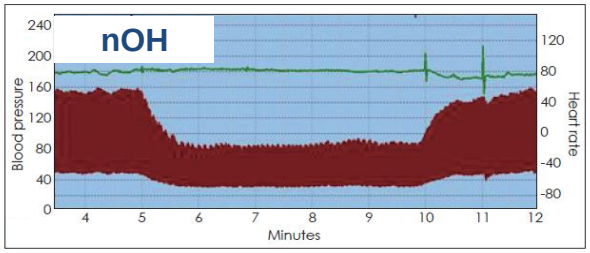
TD-9855

Dual norepinephrine and serotonin reuptake inhibitor (NSRI) for neurogenic orthostatic hypotension (nOH)

Symptomatic Neurogenic Orthostatic Hypotension (nOH) Represents a Significant Unmet Need

nOH is characterized by a **sustained drop in blood pressure** that occurs **upon standing up** and is associated with the **nervous system**, specifically due to the body producing **insufficient levels of norepinephrine**





- Associated with several autonomic disorders, including Multiple System Atrophy (MSA), Parkinson's Disease (PD), and Pure Autonomic Failure (PAF)
- Orphan indication with <200k patients in US
- Symptoms include dizziness, fainting, blurred vision and weakness
- Significant impacts to QoL for both patients and family members
  - Patients limited in routine daily functions and prone to injury from falling
  - In severe cases, patients become bedridden and require caregiver support

Current Approved Therapies in Neurogenic Orthostatic Hypotension (nOH) Have Limitations

Current therapies limited in safety, efficacy, and dosing

- Only droxidopa (Northera) and midodrine are FDA-approved for nOH
- Both are synthetic exogenous NE analogues that impact disease by increasing vascular tone
- Significant unmet need remains due to limitations of current therapies:
  - Supine hypertension (high blood pressure while lying down)
  - Require dosing three times a day
  - Patients may become refractory over time or discontinue due to AEs[1]
  - Effectiveness of droxidopa beyond two weeks has not been established[2]

Opportunity exists for effective, well tolerated nOH therapies

- TD-9855, a dual norepinephrine and serotonin reuptake inhibitor (NSRI), may lead to significant benefits for patients over existing therapy

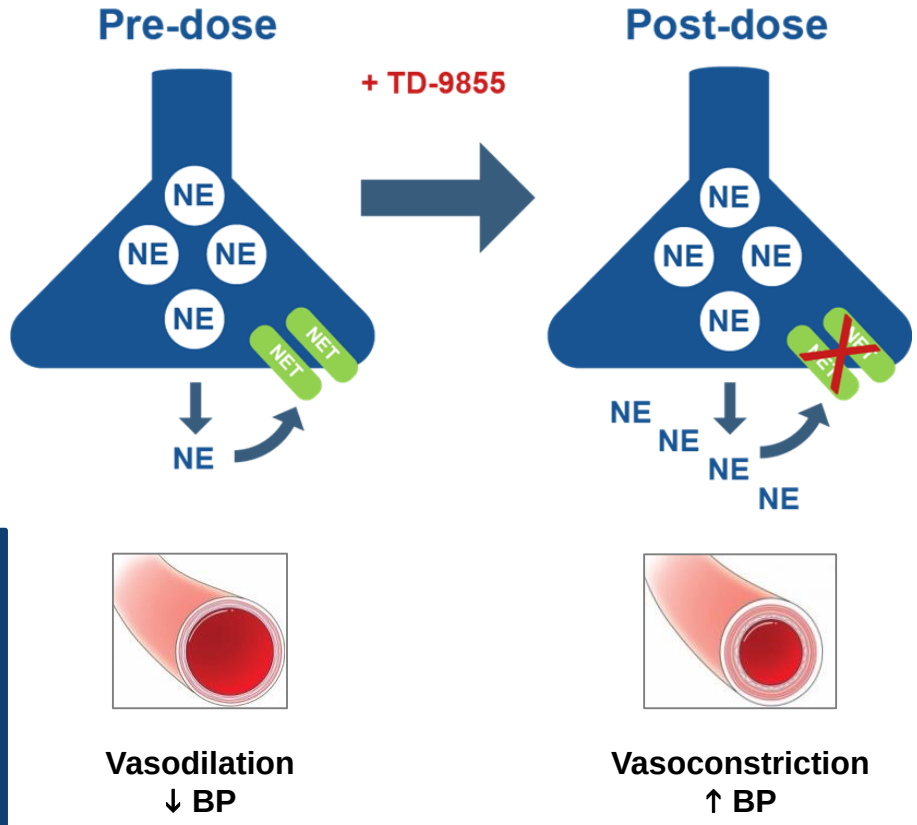
Successful nOH therapy would target reduction in symptoms and offer meaningful improvements in quality of life for patients

[1] Associated with one or both therapies noted above
[2] Northera prescribing information

NET Inhibition with TD-9855 Has Potential to Normalize Vascular Sympathetic Tone in nOH

A path to treating nOH without introducing exogenous NE

- Blockade of NET in nOH patients inhibits endogenous neuronal NE uptake
- Increased levels of NE in the synapse cause vasoconstriction and a corresponding increase in blood pressure
- Increase in blood pressure improves nOH symptoms



Rationale for 9855 in nOH

- NE dominance confirmed in humans
- QD dosing, long half-life, and metabolic profile may offer improved patient outcomes
- Favorable safety and tolerability profile established in > 500 subjects[1]

NE = Norepinephrine; NET = Norepinephrine transporter

[1] Includes Phase 1 SAD/MAD, elderly, and PET studies in healthy subjects and Phase 2a studies in fibromyalgia and ADHD patients

Exploratory Phase 2a Results Expected End of July

Intention to seek expedited development path

- **Purpose:** Phase 2a study to evaluate the effect of TD-9855 in improving symptoms of orthostatic intolerance
- Understanding totality of symptoms encompasses tests of function, orthostatic hypotension status, and other measures
  - Dizziness a cardinal symptom
  - Interest in patients who fail to accomplish 10-minute standing time at baseline

Part A	Part B	Part C (Extension)

Part A: Single ascending dose portion

✓ *Observed emerging signals of benefits to patients in Part A*

Part B: Single dose (response dose) or placebo

Part C: Multiple dose portion to assess durability of response

- Enrolling patients in open label design
- Up to 24 weeks (20 weeks dosing, 4 week wash out)
- Primary endpoint at 4 weeks

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Late Stage & Commercial Assets, Acute Care

Revefenacin (TD-4208): *Nebulized Long-Acting Muscarinic Antagonist (LAMA)*

VIBATIV® (telavancin): *Commercial, Once-Daily, Dual Mechanism Antibiotic*

Acute Care Commercial Infrastructure Positioned to Support VIBATIV® and Revefenacin

VIBATIV is Marketed as an Anti-MRSA Antibiotic

Broadened set of indications

- ✓ Approval in cSSSI and HABP/VABP[1]
- ✓ Expanded label describes use in cSSSI and HABP/VABP with concurrent bacteremia

TOUR™ patient registry study fully enrolled

- Generating "real world" data in 1,000-patient study
- Largest enrollment seen in cSSSI, osteomyelitis, bacteremia, and pneumonia
- Results to inform additional potential indications

Complementary Products to Optimize the Acute Care Organization

Opportunity to target large, addressable patient populations

- Overlap in sales calls with pulmonologists and respiratory care physicians for VIBATIV and revefenacin
- Acute care setting provides an important inflection point in patient identification
- Revefenacin collaboration with Mylan includes co-promote and profit split in the US
  - Profit split: 65% Mylan, 35% Theravance
- Combined sales infrastructures to cover hospital, outpatient and home health treatment settings
- Phase 3b PIFR (peak inspiratory flow rate) study provides important insights for the use of the product if approved in COPD

[1] VIBATIV is approved in the US for treatment of the following infections in adult patients caused by designated susceptible bacteria: complicated skin and skin structure infections (cSSSI), hospital-acquired and ventilator-associated bacterial pneumonia (HABP/VABP) caused by susceptible isolates of *Staphylococcus aureus* when alternative treatments are not suitable.

Compelling Need for Once-Daily Nebulized LAMA

Enduring Patient Niche and Significant Market Opportunity

Unmet Need for Nebulized LAMA Therapy

- Once-daily LAMAs are **first-line therapy** for moderate to severe COPD[1]
- **No nebulized LAMAs available today**; only available in handheld devices
- Nebulized therapy associated with reduced hospital readmissions in low PIFR patients[2]

Enduring Patient Niche

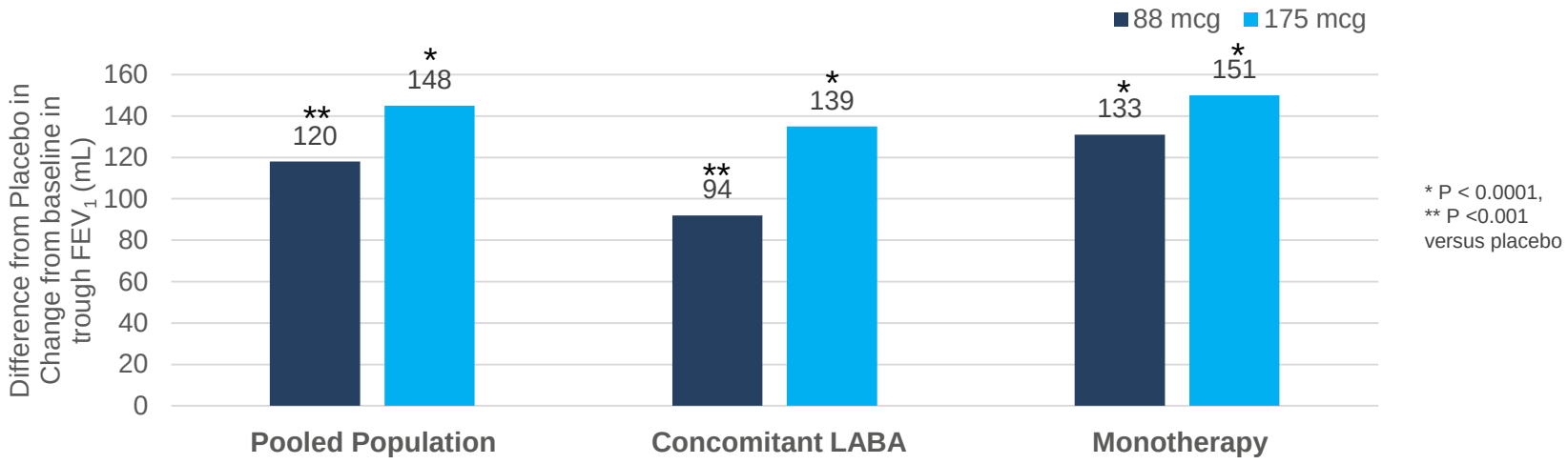
- **>100M patient treatment days** in nebulized COPD segment[3]
- **9%** of COPD patients currently use nebulizers for ongoing maintenance therapy[4]
- **41%** of COPD patients use nebulizers at least occasionally for bronchodilator therapy[4]
- Pricing in branded LA nebulized segment ~ 2x handheld Spiriva[3]

Significant Market Opportunity

- Revefenacin may be **complementary to existing nebulized LABA** treatments
- Mylan partnership brings commercial strength in nebulized segment

[1] Global Strategy for Diagnosis, Management, and Prevention of COPD. COPD = Chronic Obstructive Pulmonary Disease. [2] Suboptimal Inspiratory Flow Rates Are Associated with COPD and All Cause Readmissions. Loh et al., Annals of ATS 2017. [3] IMS Health information service: NSP for period MAT May, 2015. Excludes nebulized SABAs. IMS expressly reserves all rights, including rights of copying, distribution and republication. [4] TBPH market research (N = 160 physicians); Refers to US COPD patients.

Revefenacin: NDA for Treatment of COPD in FDA Review with PDUFA Date of November 13, 2018



- NDA supported by Phase 3 efficacy and safety studies
- Primary endpoint achieved for both doses in replicate efficacy studies
  - ✓ Robust and sustained improvements in FEV_1
  - ✓ Effective as monotherapy and as add-on to LABA or LABA/ICS
- Generally well tolerated in 12-month safety study

FEV_1 = forced expiratory volume in one second; pooled analysis

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Opportunities for Value Creation

Upcoming Milestones

Advancing Multiple Opportunities for Value Creation

Programs in Focus in 2018

Managed by Theravance Biopharma:

TD-1473 Intestinally restricted JAK inhibitor	• Initiation of Phase 2b/3 induction and maintenance study in UC • Initiation of Phase 2 induction study in Crohn's disease
TD-9855 NSRI in nOH	• Phase 2a results in symptomatic nOH • Seeking an expedited development pathway
Revefenacin (TD-4208) Nebulized LAMA in COPD	• Potential FDA approval (PDUFA date November 13, 2018)
Inhaled JAK inhibitor Serious respiratory diseases	• Progressing into the clinic in late 2018 or early 2019

Managed by GSK and Innoviva[1]:

Trelegy Ellipta (FF/UMEC/VI) Single inhaler triple therapy	• Ramp in promotional activities expected, following expanded label in US • Potential inclusion of IMPACT data in label in EU • Completion of Phase 3 study in asthma (CAPTAIN)

[1] Economic interest. Regulatory and clinical milestones as reported by GlaxoSmithKline. FF/UMEC/VI= Fluticasone Furoate/Umeclidinium/Vilanterol. Innoviva formerly Theravance, Inc. Submissions, filings, and approvals are subject to preclinical and clinical data and regulatory interactions.

About VIBATIV® (telavancin)

VIBATIV was discovered internally in a research program dedicated to finding new antibiotics for serious infections due to *Staphylococcus aureus* and other Gram-positive bacteria, including MRSA. VIBATIV is a bactericidal, once-daily, injectable lipoglycopeptide antibiotic with in vitro potency and a dual mechanism of action whereby telavancin both inhibits bacterial cell wall synthesis and disrupts bacterial cell membrane function.

VIBATIV for injection is approved in the U.S. for the treatment of adult patients for complicated skin & skin structure infections (cSSSI) caused by susceptible isolates of Gram-positive bacteria, including *Staphylococcus aureus*, both methicillin-susceptible (MSSA) and methicillin-resistant (MRSA) strains. In addition, VIBATIV telavancin is approved in the U.S. for the treatment of adult patients with hospital-acquired and ventilator-associated bacterial pneumonia (HABP/VABP) caused by susceptible isolates of *Staphylococcus aureus* when alternative treatments are not suitable. In addition, VIBATIV is approved in the U.S. for the treatment of adult patients with complicated skin & skin structure infections (cSSSI) caused by susceptible isolates of Gram-positive bacteria, including S. aureus, both methicillin-susceptible (MSSA) and methicillin-resistant (MRSA) strains. The product labeling also describes the use of VIBATIV in treating patients with concurrent bacteremia (in addition to either skin infection or pneumonia).

VIBATIV is indicated in Canada and Russia for complicated skin & skin structure infections and HAP/VAP caused by Gram-positive bacteria, including MRSA.

VIBATIV is indicated in the European Union for the treatment of adults with nosocomial pneumonia (NP) including ventilator associated pneumonia (VAP), known or suspected to be caused by methicillin resistant *Staphylococcus aureus* (MRSA) and should be used only in situations where it is known or suspected that other alternatives are not suitable.

VIBATIV® (telavancin)

Important Safety Information (US)

Mortality
Patients with pre-existing moderate/severe renal impairment (CrCl ≤50 mL/min) who were treated with VIBATIV® for hospital-acquired bacterial pneumonia/ventilator-associated bacterial pneumonia had increased mortality observed versus vancomycin. Use of VIBATIV in patients with pre-existing moderate/severe renal impairment (CrCl ≤50 mL/min) should be considered only when the anticipated benefit to the patient outweighs the potential risk.

Nephrotoxicity
New onset or worsening renal impairment occurred in patients who received VIBATIV. Renal adverse events were more likely to occur in patients with baseline comorbidities known to predispose patients to kidney dysfunction and in patients who received concomitant medications known to affect kidney function. Monitor renal function in all patients receiving VIBATIV prior to initiation of treatment, during treatment, and at the end of therapy. If renal function decreases, the benefit of continuing VIBATIV versus discontinuing and initiating therapy with an alternative agent should be assessed.

Fetal Risk
Women of childbearing potential should have a serum pregnancy test prior to administration of VIBATIV. Avoid use of VIBATIV during pregnancy unless the potential benefit to the patient outweighs the potential risk to the fetus. Adverse developmental outcomes observed in three animal species at clinically relevant doses raise concerns about potential adverse developmental outcomes in humans. If not already pregnant, women of childbearing potential should use effective contraception during VIBATIV treatment.

Contraindication
Intravenous unfractionated heparin sodium is contraindicated with VIBATIV administration due to artificially prolonged activated partial thromboplastin time (aPTT) test results for up to 18 hours after VIBATIV administration.
VIBATIV is contraindicated in patients with a known hypersensitivity to the drug.

Hypersensitivity Reactions
Serious and potentially fatal hypersensitivity reactions, including anaphylactic reactions, may occur after first or subsequent doses. VIBATIV should be used with caution in patients with known hypersensitivity to vancomycin.

Geriatric Use
Telavancin is substantially excreted by the kidney, and the risk of adverse reactions may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection in this age group.

Infusion Related Reactions
VIBATIV is a lipoglycopeptide antibacterial agent and should be administered over a period of 60 minutes to reduce the risk of infusion-related reactions. Rapid intravenous infusions of the glycopeptide class of antimicrobial agents can cause "Red-man Syndrome" like reactions including: flushing of the upper body, urticaria, pruritus, or rash.

QTc Prolongation
Caution is warranted when prescribing VIBATIV to patients taking drugs known to prolong the QT interval. In a study involving healthy volunteers, VIBATIV prolonged the QTc interval. Use of VIBATIV should be avoided in patients with congenital long QT syndrome, known prolongation of the QTc interval, uncompensated heart failure, or severe left ventricular hypertrophy.

Most Common Adverse Reactions
The most common adverse reactions (greater than or equal to 10% of patients treated with VIBATIV) were diarrhea, taste disturbance, nausea, vomiting, and foamy urine.
Full Prescribing Information, including Boxed Warning and Medication Guide in the U.S., is available at www.VIBATIV.com.