



Theravance Biopharma, Inc. (NASDAQ: TBPH)

Investor Presentation
August 2018

Cautionary Statement Regarding Forward-Looking Statements

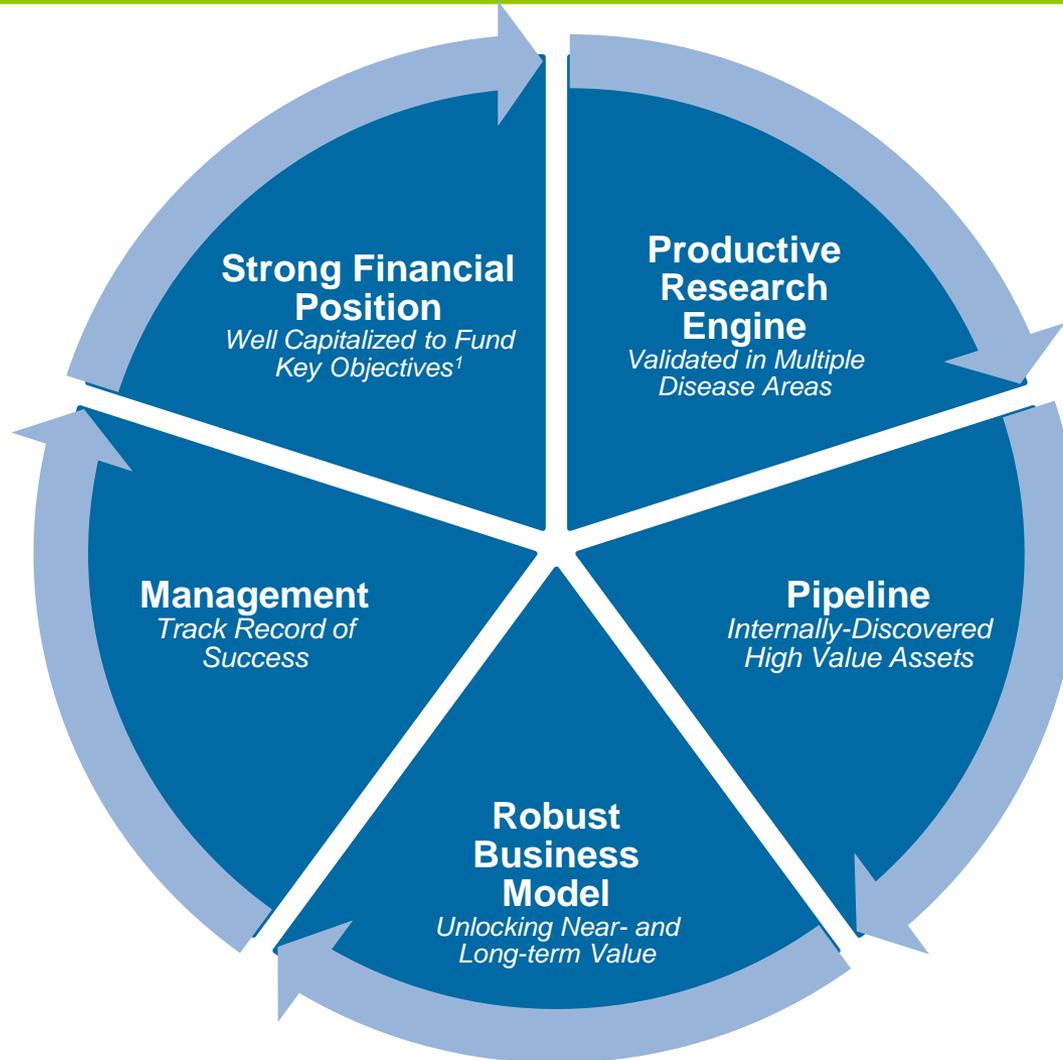
Under the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995, the company cautions investors that any forward-looking statements or projections made by the company are subject to risks and uncertainties that may cause actual results to differ materially from the forward-looking 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 August 2, 2018, and other periodic reports filed with the SEC.

Theravance Biopharma Investment Highlights



Strategic Focus in 2018

 TD-1473 (JAKi)	 TD-9855 (NSRI)	 YUPELRI™ (LAMA) ¹
<p>Partnership with global leader in Immunology</p> <p>Initiating Phase 2 study in Crohn's disease and Phase 2b/3 study in ulcerative colitis in 2H 2018</p>	<p>Positive top-line four-week results in nOH</p> <p>Durable symptom improvements; clinically meaningful benefit in standing SBP</p>	<p>NDA accepted by FDA and under review</p> <p>Assigned PDUFA date of November 13, 2018; proposed as first QD nebulized LAMA for treatment of COPD</p>

- Economic interest in Trelegy Ellipta serves as an important strategic asset²
 - Promising initial launch following approvals in US and EU in late 2017

TD-1473, TD-9855, and YUPELRI each internally discovered and developed by R&D engine which serves as important driver of long term value

⁴ JAK = Janus kinase. NSRI = norepinephrine serotonin reuptake inhibitor. nOH = neurogenic orthostatic hypotension. SBP = systolic blood pressure. QD = once-daily. LAMA = long-acting muscarinic antagonist. PDUFA = Prescription Drug User Fee Act. YUPELRI is the proposed brand name for revefenacin inhalation solution. ¹ YUPELRI™ (revefenacin) inhalation solution. ² TBPH holds 85% economic interest in upward-tiering royalty stream of 6.5% – 10% payable by GSK.



Economic Interest

*GSK's FDA-approved Trelegy Ellipta (FF/UMEC/VI):
First and only once-daily single inhaler triple therapy*

GSK's Trelegy Ellipta Offers Significant Potential

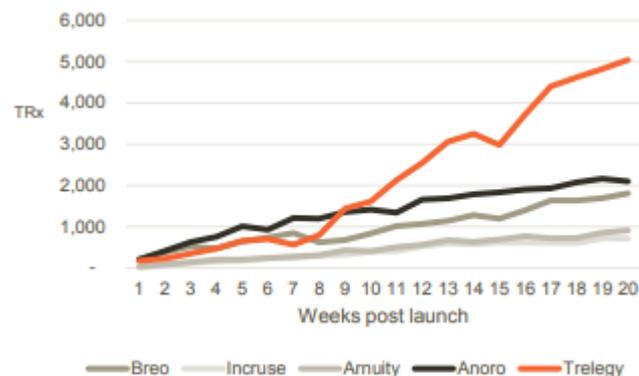
Economic interest in Trelegy Ellipta serves as an important strategic asset

- Upward-tiering royalty 5.5% - 8.5% of worldwide net sales¹
- Passive economic interest; no product cost obligations

Program Summary

- Approved for COPD in US and EU²
- 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



Economic interest in Trelegy serves as an important strategic asset¹

- ✓ Promising initial launch by GSK following approvals in US and EU in late 2017
- ✓ Expanded COPD indication approved by FDA, supported by data from IMPACT study
- ✓ Commercial prioritization by GSK in terms of investment and product positioning
- ✓ Entitled to upward-tiering royalty of 5.5% - 8.5% of worldwide net sales



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 Findings To-Date

✓ Phase 1b study in UC patients complete

- 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

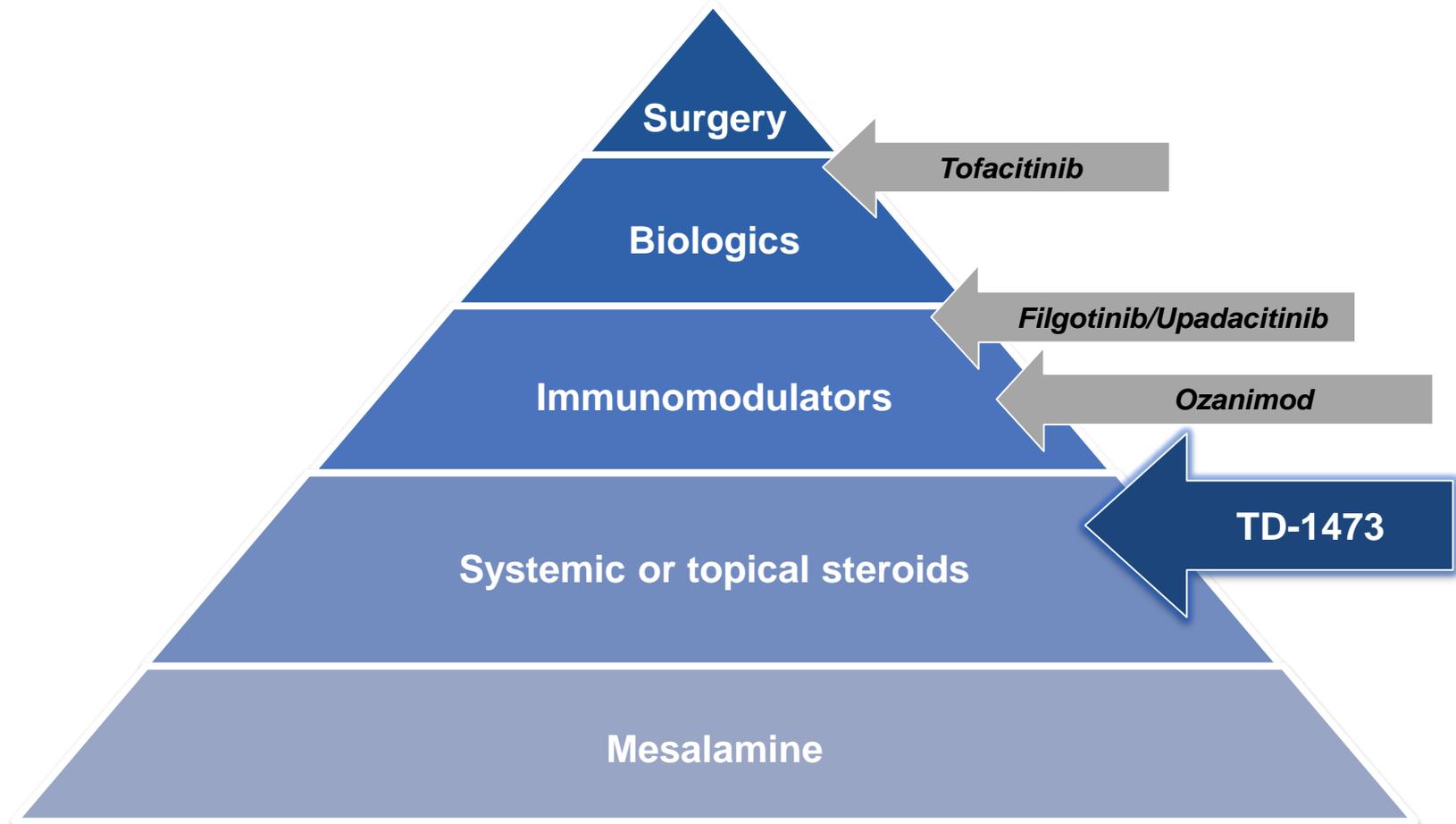
- Favorable safety margins in 6 and 9 month studies



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

Vision for TD-1473 in UC: Transform Treatment Paradigm

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



TD-1473: Encouraging Findings in Phase 1b Study

4-week treatment in 40 patients with ulcerative colitis

Key Findings

Favorable overall safety and tolerability	No systemic or opportunistic infections (including herpes zoster)
	No evidence of reduce white cell counts
Minimal systemic exposure	Plasma levels of TD-1473 very low
	Consistent in all cohorts to levels observed in healthy volunteers
Biologic activity in GI tract	Rates of clinical response higher for all active doses compared to placebo ¹
	Clinical responses matched by dose-dependent reductions in surrogate biomarkers ²
	Endoscopic improvements and mucosal healing reported in all active arms; none reported in placebo arm
	Rectal bleeding scores improved above placebo at highest two doses
	Dose-related increases in local GI tissue drug concentrations; higher two doses produced mean concentrations above the JAK IC50

Presentation of full results at future medical meeting;
progressing into Phase 2b/3 in UC and Phase 2 in Crohn's disease in 2H 2018

Next Steps in Clinical Development of TD-1473

FDA and EMA dialogues on study design features complete



Crohn's disease

Initiating Phase 2 study in 3Q18

- Modulating IL-12 and IL-23 cytokines through TYK2 associated with an effect on disease
- Proof-of-concept study on basis of Phase 1b data in ulcerative colitis
- Assessing 80 and 200 mg doses
- Crohn's timelines accelerated due to collaboration



Ulcerative Colitis

Initiating Phase 2b/3 study in 4Q18

- Large, adaptive design induction and maintenance study in ulcerative colitis
- Assessing 20, 80, and 200 mg doses
- Phase 2b/3 design expected to expedite development path
- Leveraging Janssen expertise in design and conduct

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

Global Collaboration Agreement for TD-1473

Potential to maximize value of TD-1473 for Theravance Biopharma



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
 - Deal value up to \$1B milestones, including \$100M upfront; additional profit-share in US

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



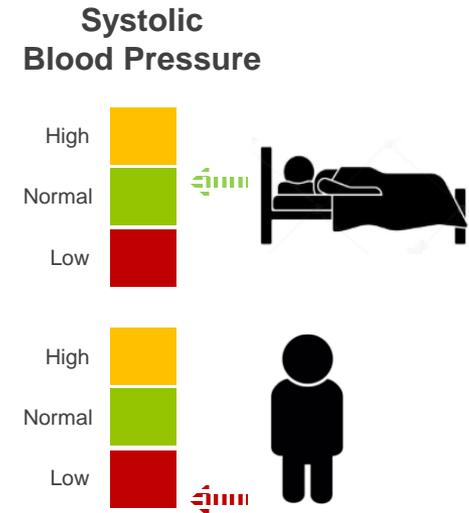
TD-9855

Once-daily dual norepinephrine and serotonin reuptake inhibitor (NSRI) for neurogenic orthostatic hypotension (nOH)

Symptomatic nOH Represents a Significant Unmet Need for Patients

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

- Associated with several autonomic disorders: MSA, PD, PAF
- Symptoms include dizziness, fainting, blurred vision and weakness
- Blood pressure a key biological driver to symptoms
- Orphan indication with < 200k patients in US



Opportunity exists for safe and effective treatment

- Only droxidopa (Northera) and midodrine FDA-approved for nOH
- Synthetic exogenous NE analogues impacting disease by increasing vascular tone
- Limitations of current therapy:
 - Supine hypertension, TID dosing, patients refractory or discontinue, lack of durability¹
- Ideal therapy would target durable improvement in symptoms and daily function

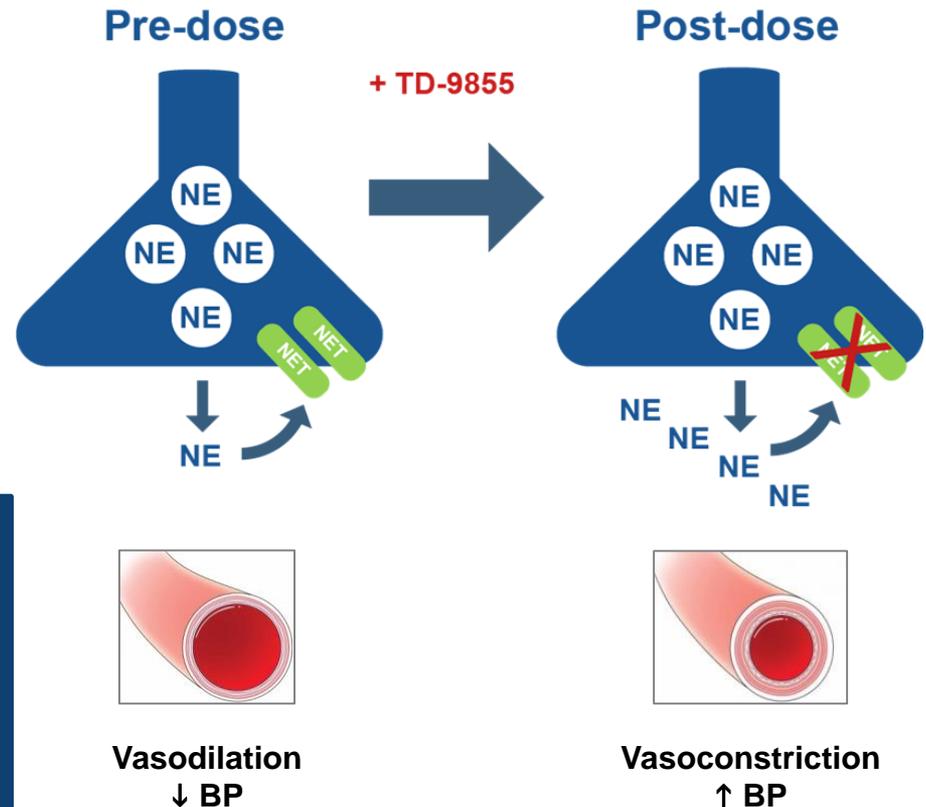
NET Inhibition with TD-9855 Has Potential to Normalize Vascular Sympathetic Tone in nOH

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

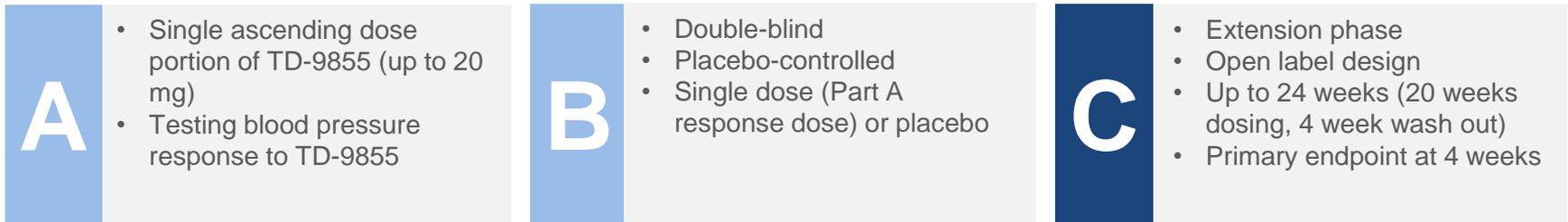
- NE dominance confirmed in humans
- QD dosing, long half-life, and metabolic profile may offer improved patient outcomes
- Favorable safety and tolerability profile established in > 500 subjects¹



TD-9855: Overview of Phase 2 Study in nOH

Designed to evaluate initial and durable response to therapy

Three-part design in patients with nOH:



Patients started on Part A, and responders moved to Part B and/or Part C (extension phase)

Purpose: To evaluate the effect of TD-9855 in improving blood pressure and key nOH symptoms

Part C: Responders in Part A eligible for open-label TD-9855 for up to 5 months

- Designed to assess durability of effect
- Primary assessment at four weeks (Day 29)
- Efficacy evaluations: OHSA¹ #1; standing time duration; standing SBP
- Also assessed safety and PK of TD-9855

TD-9855: Top-line Phase 2 Results in nOH

Parts A and B

A Initial responses observed

Responses reported in majority of patients treated

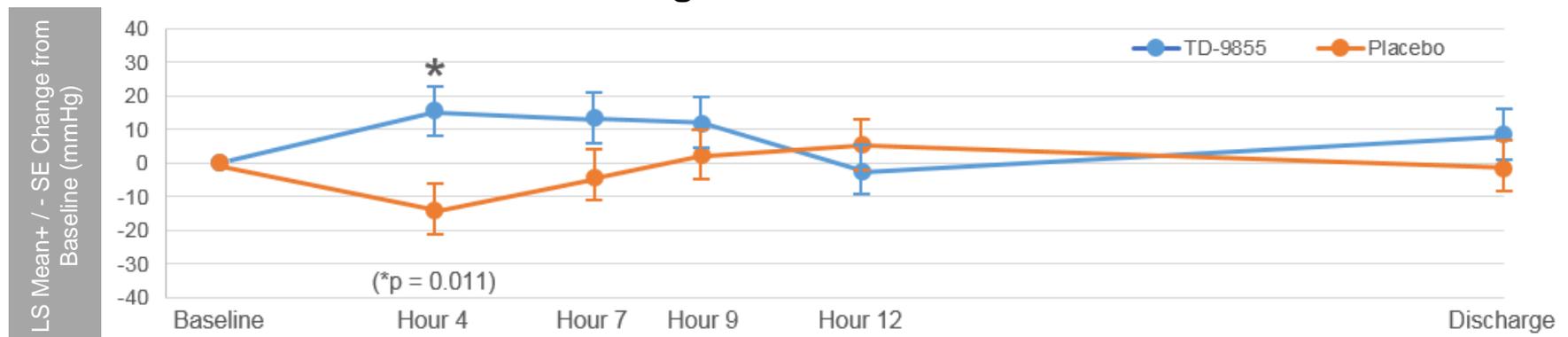
- 27 of 34 patients enrolled in Part A showed improvements in SBP and/or standing time
- Responses observed above 5 mg

B Confirmation vs. placebo

Statistically significant difference of 30 mmHg at 4 hours post-dose ($p = 0.011$)

- TD-9855 increased SBP from a low baseline
- SBP dropped on placebo during day as expected, due to postural changes and eating
- No evidence of supine hypertension with TD-9855 overnight

Part B Change from Baseline SBP



TD-9855: Top-line Phase 2 Results in nOH

Part C (extension phase)

C

Durability of effect observed in repeat dose extension phase

16 of 21 patients (76%) completed four weeks of treatment

Reductions in symptom severity, with most pronounced benefit in patients with symptomatic nOH¹

- Mean reduction in OHSA #1 = 2.4 at four weeks (n=16)
- 13 completers had OHSA #1 \geq 4 at baseline; **mean reduction in group = 3.8 at four weeks**

Consistent increases in SBP through four weeks

- Clinically meaningful increases in standing SBP (7 mmHg or greater) after standing for three minutes at all time points on all weekly clinic visits

Generally well tolerated; no serious adverse events assessed as drug-related

Positive results across three-part study, including durability of effect, provide basis to begin registrational Phase 3 program in nOH in late 2018 or early 2019

Late Stage & Commercial Assets

YUPELRI™ (revefenacin) inhalation solution
Nebulized Long-Acting Muscarinic Antagonist (LAMA)

VIBATIV® (telavancin)
Marketed, Once-Daily, Dual Mechanism Antibiotic

Acute Care Commercial Infrastructure Positioned to Support VIBATIV[®] and YUPELRI[™]

VIBATIV

- Approval in cSSSI and HABP/VABP¹
- Expanded label describes use in cSSSI and HABP/VABP with concurrent bacteremia
- TOUR[™] 1000-patient registry: largest enrollment seen in cSSSI, osteomyelitis, bacteremia, and pneumonia

YUPELRI

- Once-daily nebulized LAMA proposed for treatment of COPD
- PDUFA date November 13, 2018
- Partnered with Mylan
- Phase 3b PIFR study provides important insights for use if approved



Pulmonologists

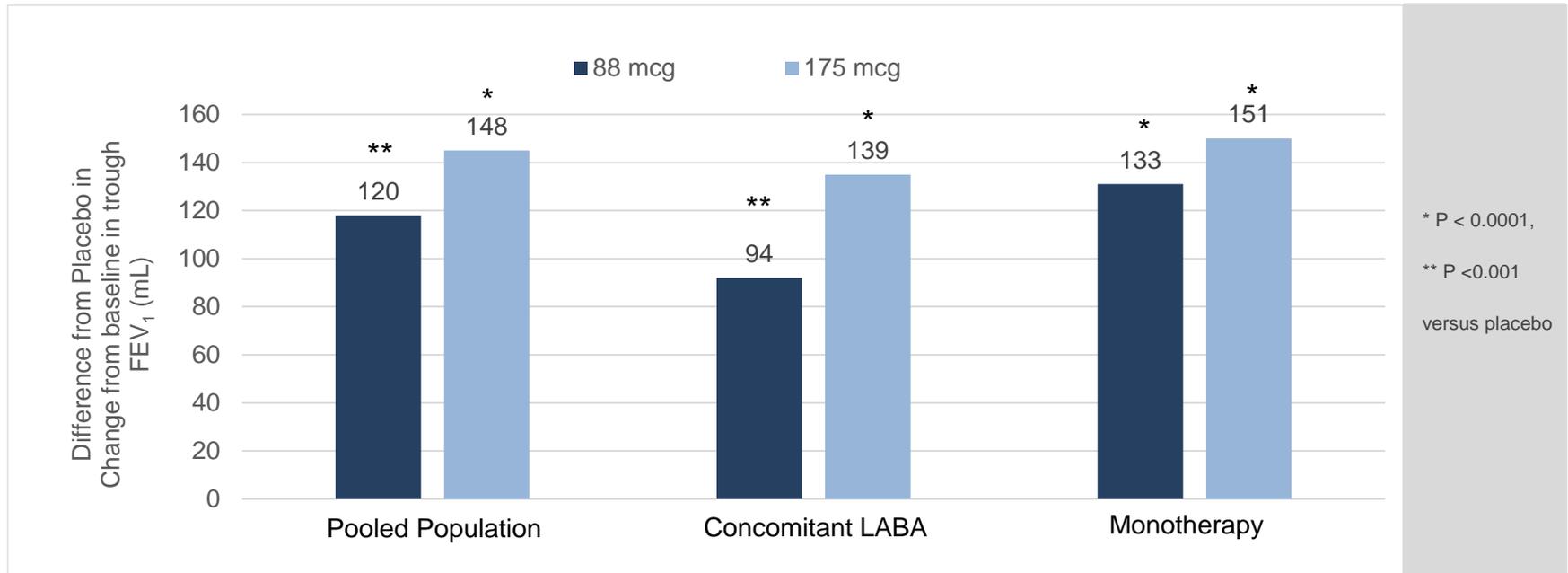
Respiratory
Specialists

- ✓ Hospital overlap in sales calls with respiratory care physicians and pulmonologists for YUPELRI and VIBATIV
- ✓ Theravance acute care sales force can target opportunities both in hospital care and in transition (to out-patient care)

Combined Theravance and Mylan sales infrastructures to cover hospital, outpatient and home health treatment settings

YUPELRI: PDUFA Date November 13, 2018

Potential as first once-daily nebulized LAMA for COPD



- NDA supported by Phase 3 efficacy and safety studies
- Primary endpoint achieved for both doses in replicate efficacy studies
 - ✓ Robust and sustained improvements in FEV₁
 - ✓ Effective as monotherapy and as add-on to LABA or LABA/ICS
- Generally well tolerated in 12-month safety study



Opportunities for Value Creation

Upcoming Milestones

Focus on Strategic Priorities

Commitment to developing transformational medicines

Opportunities to Create Transformational Medicines	YUPELRI™ (revefenacin)	Nebulized LAMA in COPD <ul style="list-style-type: none"> Additional clinical results in 2018, eg: exacerbations data at ERS (oral) PDUFA date November 13, 2018
	TD-1473	Intestinally-restricted JAKi for inflammatory intestinal diseases <ul style="list-style-type: none"> Initiating Phase 2 study in Crohn's disease (3Q18) and Phase 2b/3 study in ulcerative colitis (4Q18)
	TD-9855	NSRI in symptomatic neurogenic orthostatic hypotension <ul style="list-style-type: none"> Initiating Phase 3 program in late 2018 or early 2019
	TD-8236	Inhaled JAK inhibitor for serious respiratory diseases <ul style="list-style-type: none"> Progression into first in human studies in late 2018
	Research	2018 R&D Day to highlight new programs advancing towards clinic

Strategic Asset	Trelegy Ellipta ¹	(FF/UMEC/VI) Single inhaler triple therapy in COPD <ul style="list-style-type: none"> Potential label expansion in EU and regulatory approval in Japan Phase 3 CAPTAIN study (asthma) expected to complete in early 2019
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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 \leq 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 \leq 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.