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Medicines That Make a Difference®

Theravance Biopharma, Inc. (NASDAQ: TBPH)

Investor Presentation

September 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.

Insight and Innovation Drive Long-term Growth

Focus on discovering transformational medicines

- Create value from strategic integration of key functional insights
- Focus on transformative products to deliver value to payers, patients and HCP's
- Pursue medicines with "difficult-to-replicate" design characteristics for long term competitive advantage

Proven development expertise to deliver innovation

- Leverage preclinical data and translational science expertise to design clinical studies that provide insights and maximize value of early programs
- Integrated approach accelerates time to pivotal studies (TD-1473, TD-9855)
- Leverage partnerships to complement and expand existing expertise
- Diversity in portfolio and disease knowledge, with new programs advancing into the clinic

Integrated competencies in research and development provide valuable insights to deliver innovation and long-term growth

Strategic Focus in 2018

TD-1473 (JAKi)

Partnership with global leader in Immunology

Initiating Phase 2 study in Crohn's disease and pivotal Phase 2b/3 study in ulcerative colitis in 2H 2018

TD-9855 (NSRI)

Positive top-line four-week results in nOH

Initiating pivotal Phase 3 program in late-2018 or early-2019

YUPELRI™ (LAMA)[1]

NDA accepted by FDA and under review

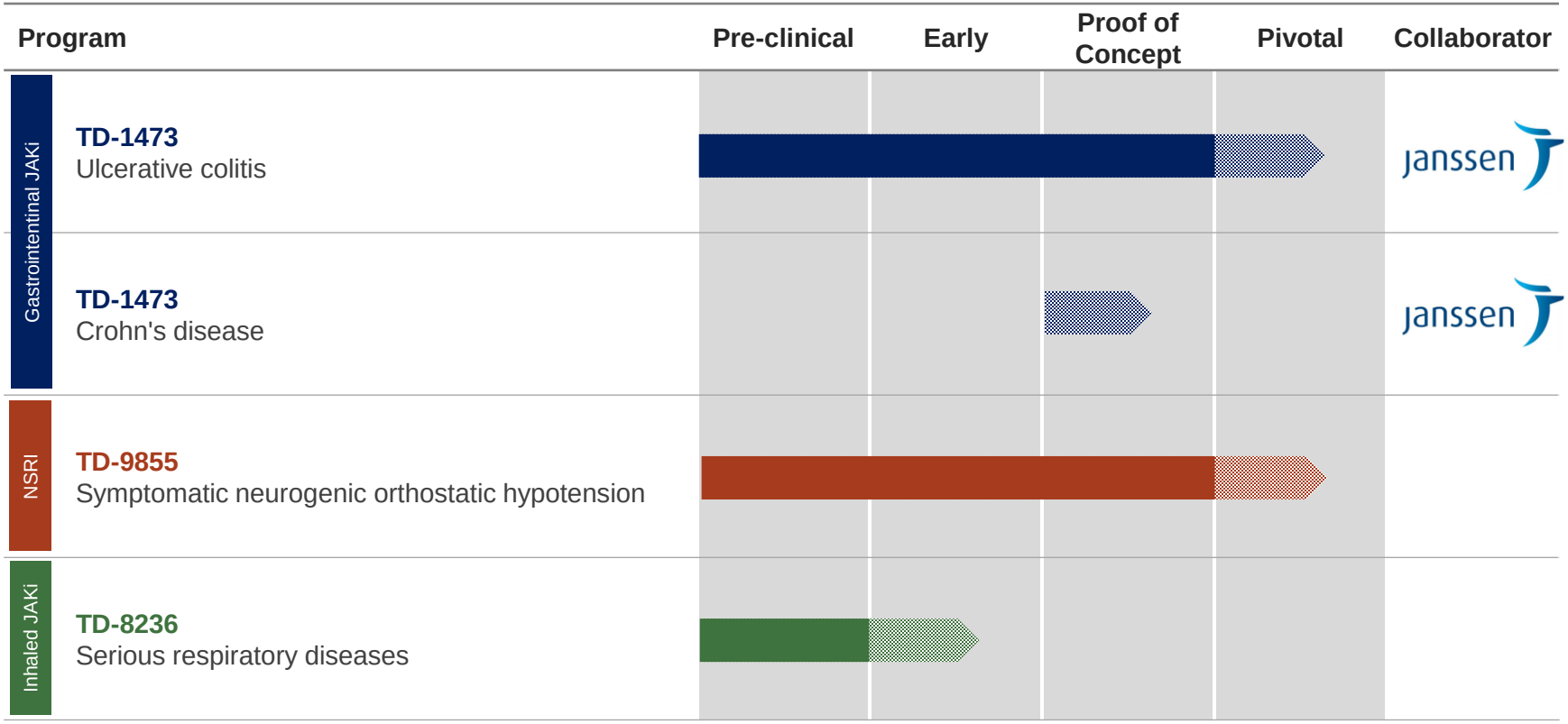
Assigned PDUFA date of November 13, 2018; proposed as first QD nebulized LAMA for treatment of COPD

- Economic interest in Trelegy Ellipta serves as an important strategic asset[2]
  - 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

JAK = Janus kinase. NSRI = noreprenephrine 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.

Development Pipeline Advancing Forward



Multiple programs advancing into pivotal studies, underpinned by future potential cashflows from Trelegy royalties, Janssen milestones and planned YUPELRI launch

Shading denotes planning underway to begin study in respective development stage

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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**

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

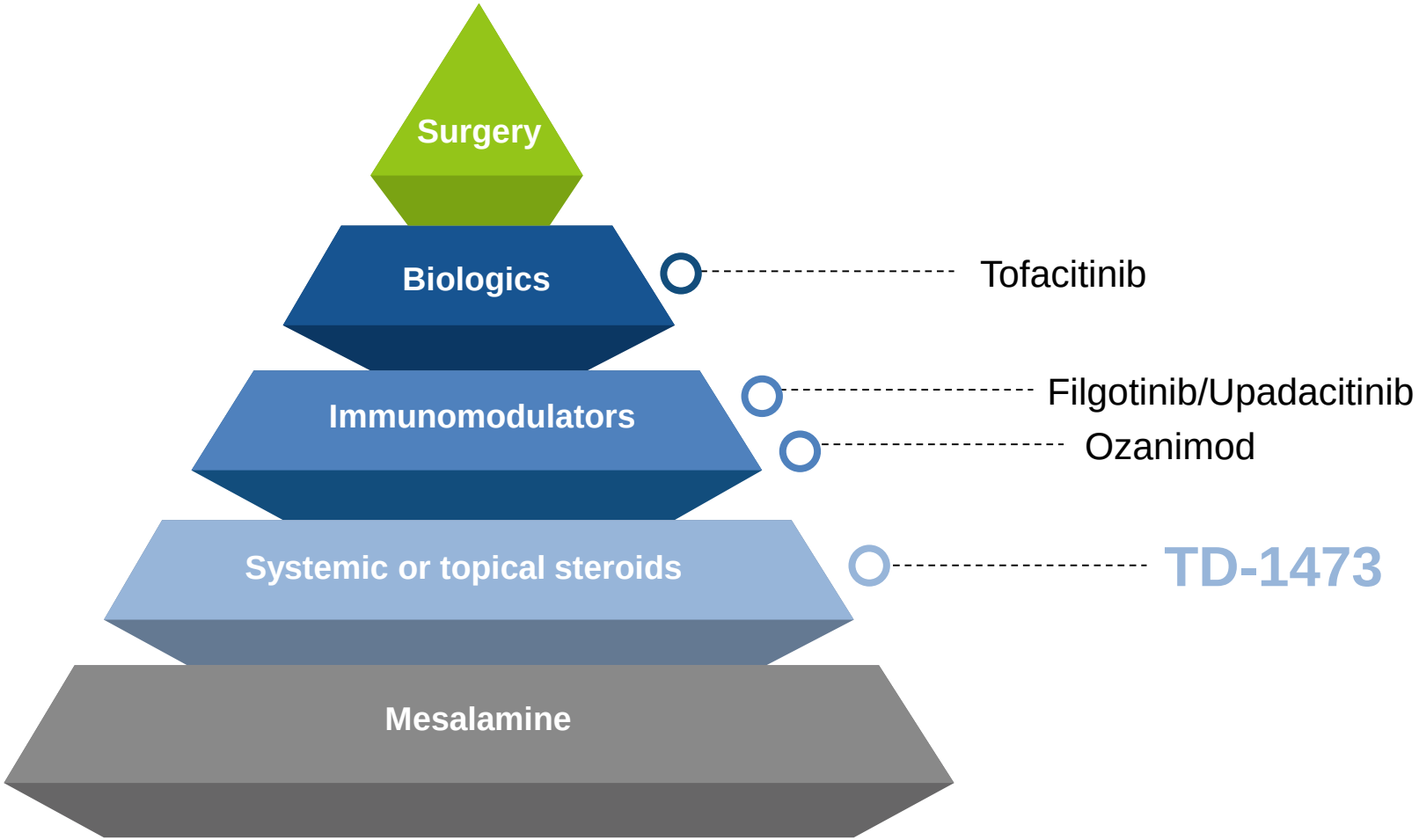
- Favorable safety margins in 6 and 9 month studies

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

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

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	**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
	Rates of **clinical response** higher for all active doses compared to placebo[1]
	Clinical responses matched by **dose-dependent reductions in surrogate biomarkers**[2]
	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

[1] Clinical response as measured by both partial and full Mayo
[2] Surrogate biomarkers include C-reactive protein (CRP) and fecal calprotectin

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

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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
  - 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

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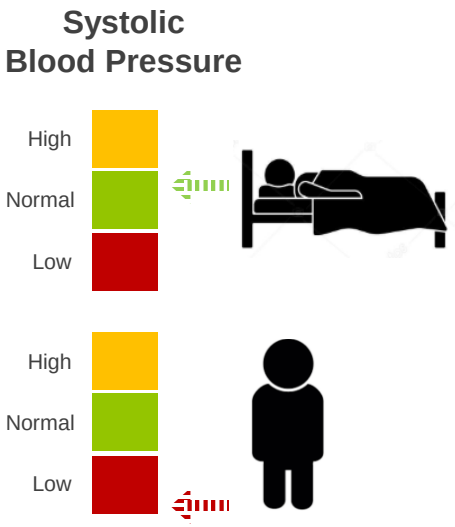
TD-9855

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

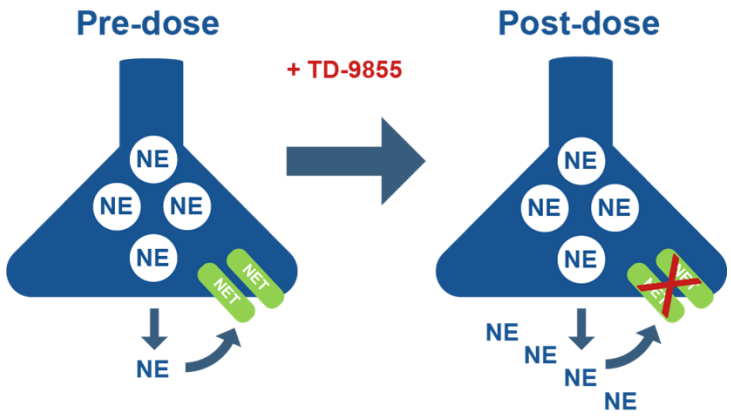
- Only droxidopa (Northera) and midodrine FDA-approved for nOH
- Synthetic exogenous NE analogues impacting disease by increasing vascular tone
- Limitations of current therapy
  - Supine hypertension, TID dosing, patients refractory or discontinue, lack of durability[1]
- Ideal therapy would target durable improvement in symptoms and daily function

[1] Existing options associated with one or both therapies noted above; Northera prescribing information. TID = three times per day. MSA = Multiple Systems Atrophy. PD = Parkinson's Disease. PAF = Primary Autonomic Failure

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

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:

A
- Single ascending dose portion of TD-9855 (up to 20 mg)
- Testing blood pressure response to TD-9855

B
- Double-blind
- Placebo-controlled
- Single dose (Part A response dose) or placebo

C
- Extension phase
- Open label design
- Up to 24 weeks (20 weeks dosing, 4 week wash out)
- Primary endpoint at 4 weeks

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: OHSA[1] #1; standing time duration; standing SBP
- Also assessed safety and PK of TD-9855

[1] OHSA = Orthostatic Hypotension Symptom Assessment. OHSA #1 measures dizziness (cardinal symptom of nOH), lightheadedness, feeling faint, or feeling of impending black out

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

Parts A and B

A Initial responses observed

Responses reported in majority of patients treated

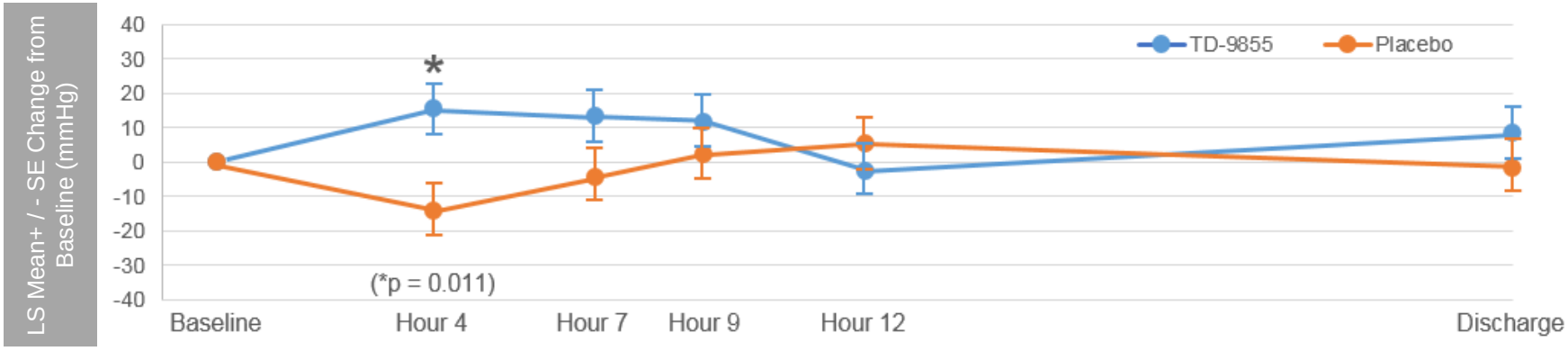
- 27 of 34 patients enrolled in Part A showed improvements in SBP and/or standing time
- Responses observed above 5 mg

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



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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 nOH[1]

- 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

[1] Symptomatic defined as OSHA #1 $\geq$ 4.

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NDA Filed & Commercial Assets

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

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

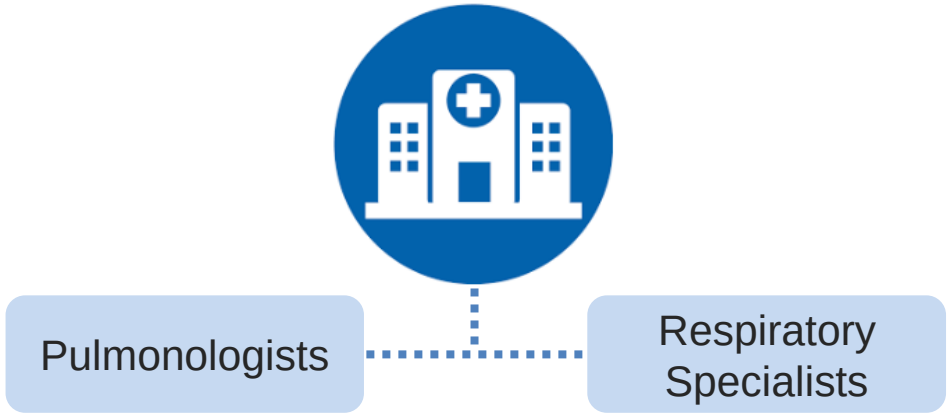
Acute Care Commercial Infrastructure Positioned to Support VIBATIV® and YUPELRI™

VIBATIV

- Approval in cSSSI and HABP/VABP[1]
- 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



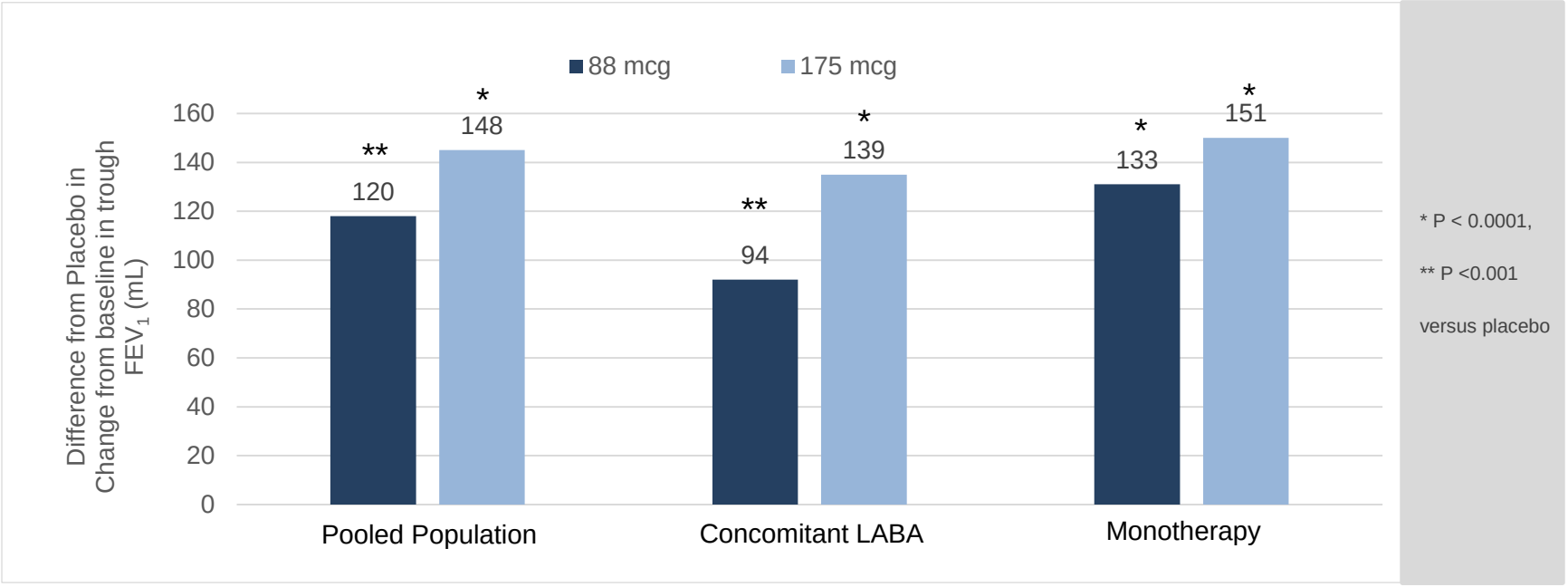
- ✓ Hospital overlap in sales calls with respiratory care physicians and pulmonologists for YUPELRI and VIBATIV
- ✓ Theravance acute care sales force can target opportunities both in hospital care and in transition (to out-patient care)

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

[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.

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 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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Economic Interest

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

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

GSK's Trelegy Ellipta Offers Significant Potential

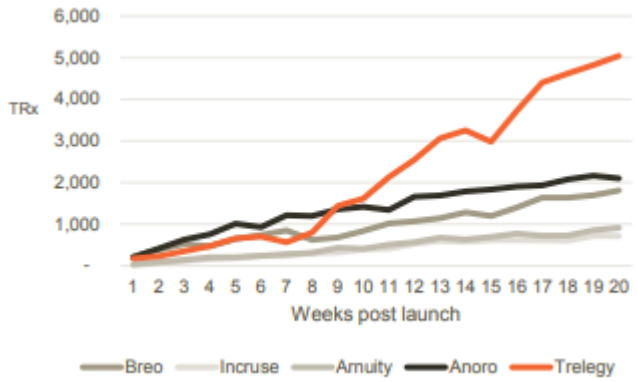
Economic interest in Trelegy Ellipta serves as an important strategic asset

- Upward-tiering royalty 5.5% - 8.5% of worldwide net 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

Economic interest in Trelegy serves as an important strategic asset[1]

- 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

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. COPD = chronic obstructive pulmonary disease

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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** • 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** • 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** • Initiating Phase 3 program in late 2018 or early 2019
	TD-8236	**Inhaled JAK inhibitor for serious respiratory diseases** • 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** • Potential label expansion in EU and regulatory approval in Japan • Phase 3 CAPTAIN study (asthma) expected to complete in early 2019

[1] Economic interest. FF/UMEC/VI= Fluticasone Furoate/Umeclidinium/Vilanterol. Innoviva formerly Theravance, Inc. All statements based on publicly available information.

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.