Theravance Biopharma, Inc.

(NASDAQ: TBPH)

Third Quarter 2019 Financial Results & Business Update

November 5, 2019

Theravance® Biopharma®

Medicines That Make a Difference®

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 may include the Company's strategies, plans and objectives, the Company's regulatory strategies and timing of clinical studies (including the data therefrom), the potential characteristics, benefits and mechanisms of action of the Company's product and product candidates, the potential that the Company's research programs will progress product candidates into the clinic, the Company's expectations for product candidates through development, potential regulatory approval and commercialization (including their differentiation from other products or potential products), product sales or profit share revenue and the Company's expectations for its 2019 operating loss, excluding share-based compensation.

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 potential future disagreements with Innoviva, Inc. and TRC LLC, the uncertainty of arbitration and litigation and the possibility that an arbitration award or litigation result could be adverse to the Company, delays or difficulties in commencing, enrolling or completing clinical studies, the potential that results from clinical or non-clinical studies indicate the Company's compounds or product candidates are unsafe or ineffective, risks that product candidates do not obtain approval from regulatory authorities, the feasibility of undertaking future clinical trials for our product candidates based on policies and feedback from regulatory authorities, dependence on third parties to conduct clinical studies, delays or failure to achieve and maintain regulatory approvals for product candidates, risks of collaborating with or relying on third parties to discover, develop, manufacture and commercialize products, and risks associated with establishing and maintaining sales, marketing and distribution capabilities with appropriate technical expertise and supporting infrastructure.

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 5, 2019, and other periodic reports filed with the SEC.

Focus on Strategic Priorities

KEY PROGRAMS DRIVE NEAR AND LONG-TERM VALUE-CREATING EVENTS

Opportunities to Create Transformational Medicines	YUPELRI®	Nebulized LAMA in COPD • U.S. commercial launch progressing in partnership with Mylan
	TD-1473	Gut-selective oral JAK inhibitor for inflammatory intestinal diseases • Phase 2b/3 RHEA study in ulcerative colitis ongoing; Phase 2b data planned late-2020 • Phase 2 DIONE study in Crohn's disease ongoing; data planned late-2020
	Ampreloxetine	NRI in symptomatic neurogenic orthostatic hypotension (nOH) • Registrational Phase 3 program progressing; 4-week efficacy data planned 2H 2020
	TD-8236	Lung-selective inhaled pan-JAK inhibitor for inflammatory lung diseases • Positive initial Phase 1 results including biomarker data reported; data from the ongoing biomarker cohort in moderate to severe asthmatics planned 1H 2020 • Progressing to allergen challenge study in Q4 2019; data planned 2020
	TD-5202	Gut-selective oral irreversible JAK3 inhibitor for inflammatory intestinal diseases • Phase 1 study in healthy subjects underway; data planned 1H 2020
	Research	Organ-selective research platform designed to expand therapeutic index compared to conventional systemic therapies
Economic Interest[1]	TRELEGY ELLIPTA[1]	Once-daily single inhaler triple therapy in COPD • Product launched in 38 markets; China launch expected Q4 2019 • sNDA filed supporting revised labelling on reduction in risk of all-cause mortality vs. ANORO in COPD • sNDA filed for use in asthma

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TD-1473: Gut-selective Oral Pan-JAK Inhibitor

LATE STAGE STUDIES IN ULCERATIVE COLITIS AND CROHN'S DISEASE

Ulcerative colitis

RHEA PROGRAM

Phase 2b/3 (N=240)
Dose-finding induction
8 weeks

Phase 3 (N=640)
Dose-confirming induction
8 weeks

Responders

Maintenance phase[1]
44 weeks

Crohn's disease

DIONE STUDY

Phase 2 (N=160)
Dose-finding induction
12 weeks

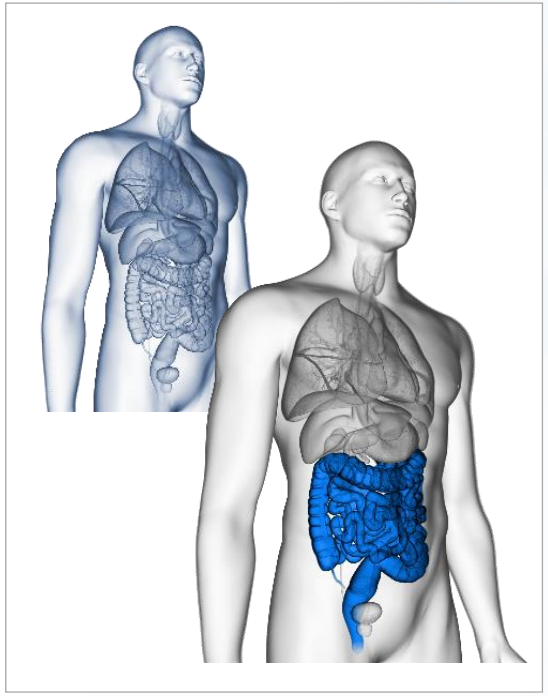
Active treatment extension
48 weeks

Phase 2b/3 study in UC and Phase 2 study in CD progressing; data planned late-2020

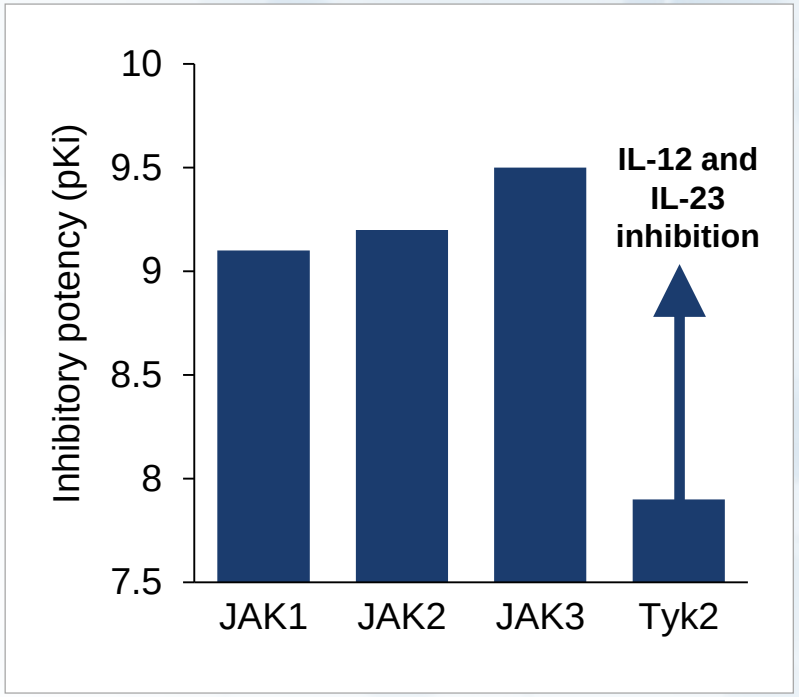
[1] Maintenance phase of the study will have induction responder subjects re-randomized to active doses compared to placebo at 44 weeks

TD-1473 Research Vision

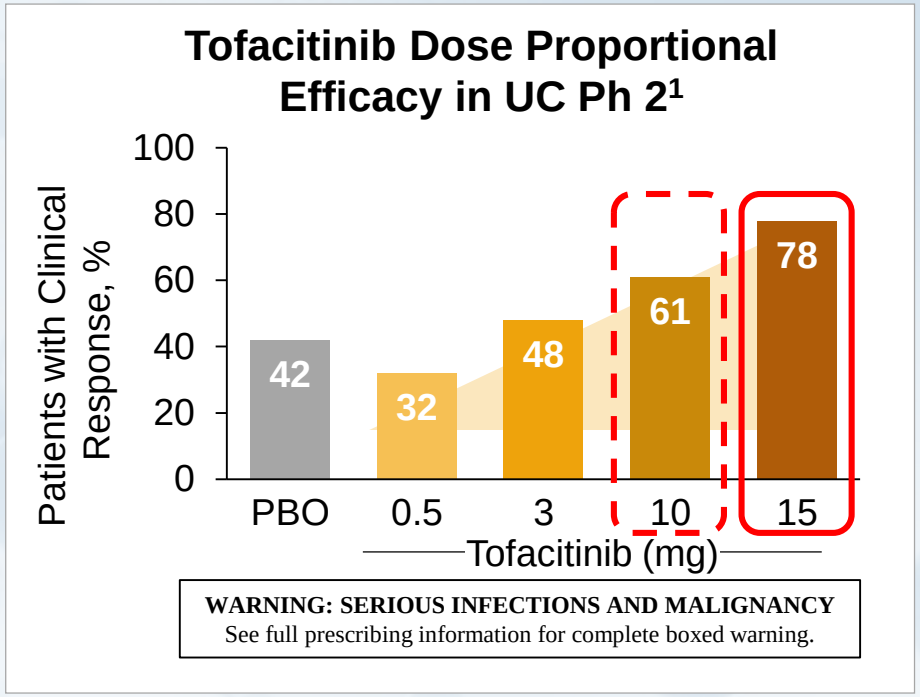
ORGAN-SELECTIVE APPROACH DESIGNED TO EXPAND THERAPEUTIC INDEX



Treat disease at site to maximize efficacy



Optimize pharmacology to include potent inhibition of Tyk2



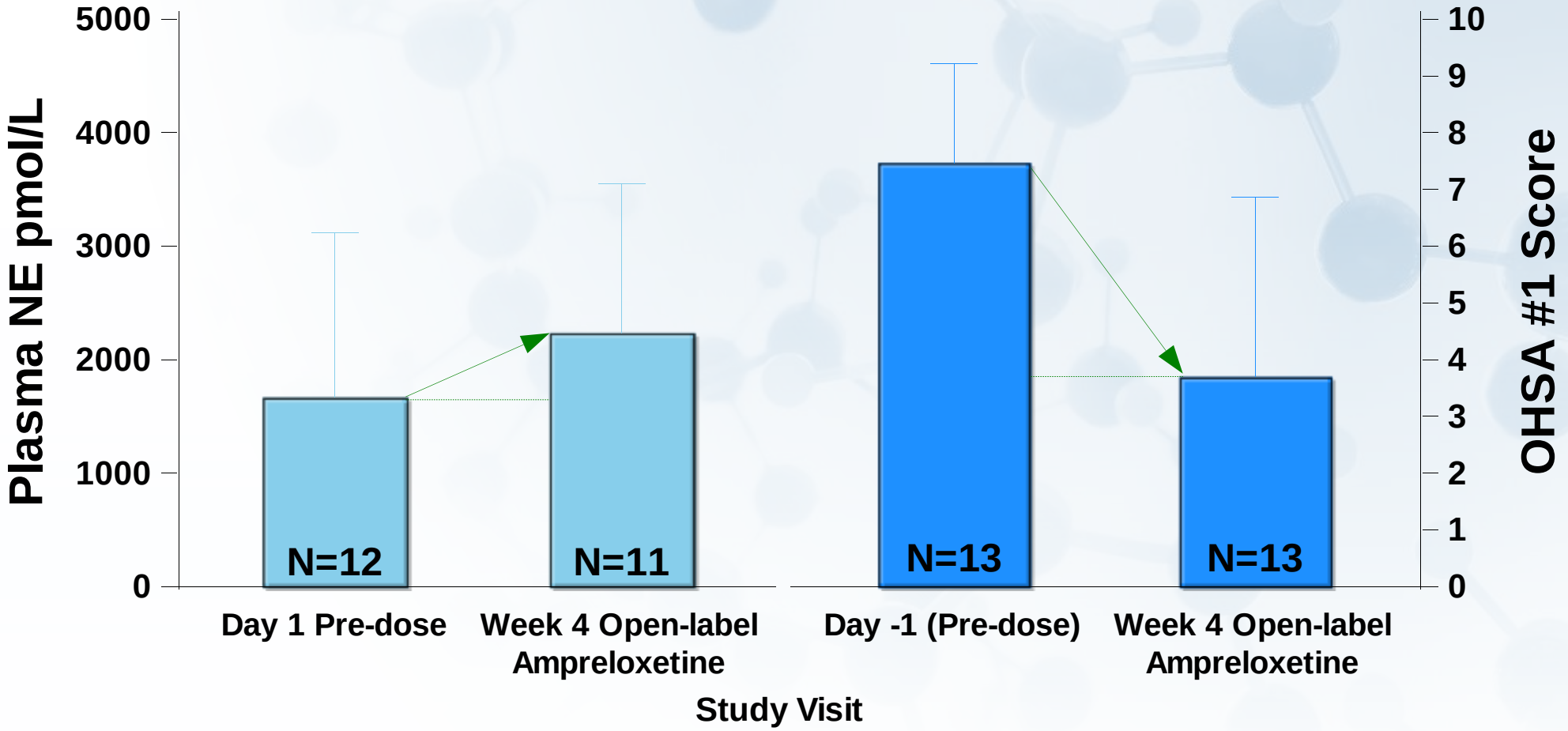
Improve upon the efficacy of a clinically validated target

Encouraging 4-week exploratory Phase 1b data reported in UC patients; plus robust preclinical tox package (including daily dose administration for 6 and 9 months)

[1] Sandborn WJ, et al. N EnglJ Med 2012;367:616-24
UC = Ulcerative colitis

Ampreloxetine: Supplemental Phase 2 Data in nOH

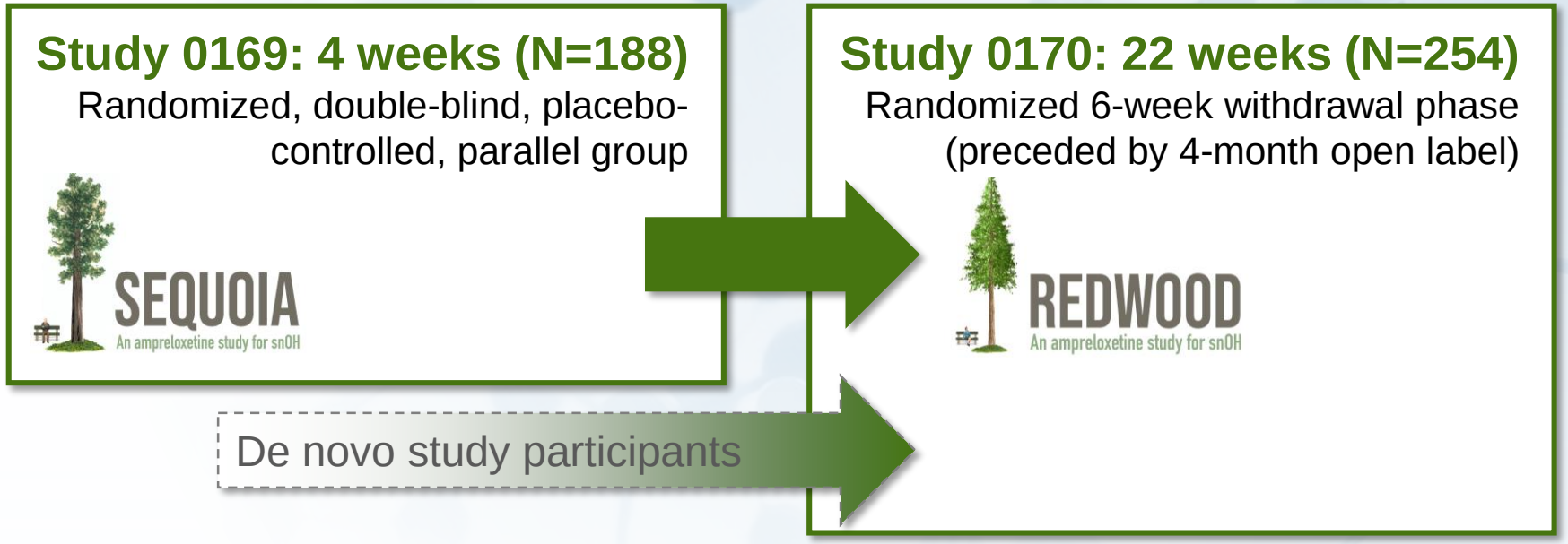
NOREPINEPHRINE PLASMA LEVELS & OHSA #1 IN SYMPTOMATIC PATIENTS



[1]Baseline OHSA #1 >4 points.
OHSA, Orthostatic Hypotension Symptom Assessment.
NE, Norepinephrine.
Kaufmann, H, et al., 2019

Ampreloxetine: Norepinephrine Reuptake Inhibitor (NRI)

PHASE 3 REGISTRATIONAL PROGRAM IN SYMPTOMATIC NOH

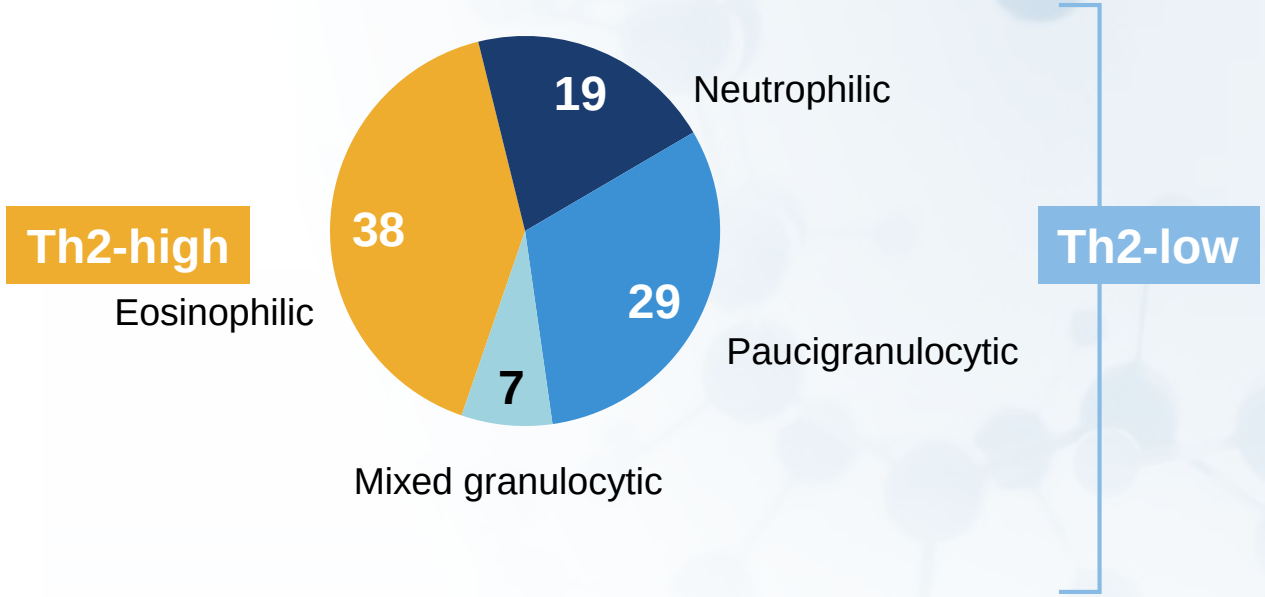


Phase 2 data supportive of ongoing Phase 3 program; Phase 3 4-week efficacy data expected 2H 2020

TD-8236: Lung-selective Inhaled pan-JAK Inhibitor

POTENTIAL TO ADDRESS PATIENTS NEEDS REGARDLESS OF TH2 PHENOTYPE

Patient heterogeneity in severe asthma



JAK/STAT cytokines implicated in severe asthma

Th2-high	Th2-low
IL-4	**IL-23**/IL-12
IL-13	**IL-6**
IL-5	IL-27
TSLP	IFN-γ

Bold denotes biologics in development or approved

TD-8236 shown to potently inhibit targeted mediators of Th2-high and Th2-low asthma in human cells in preclinical studies

- Novel approved biologics address only Th2-high asthma
- Key treatment needs: Prevention of exacerbations and symptom control for patients regardless of Th2 phenotype

Simpson JL, et al. Resp 2006;11:54-61.

TD-8236: Positive Phase 1 Clinical Trial in Healthy Subjects and Mild Asthmatics

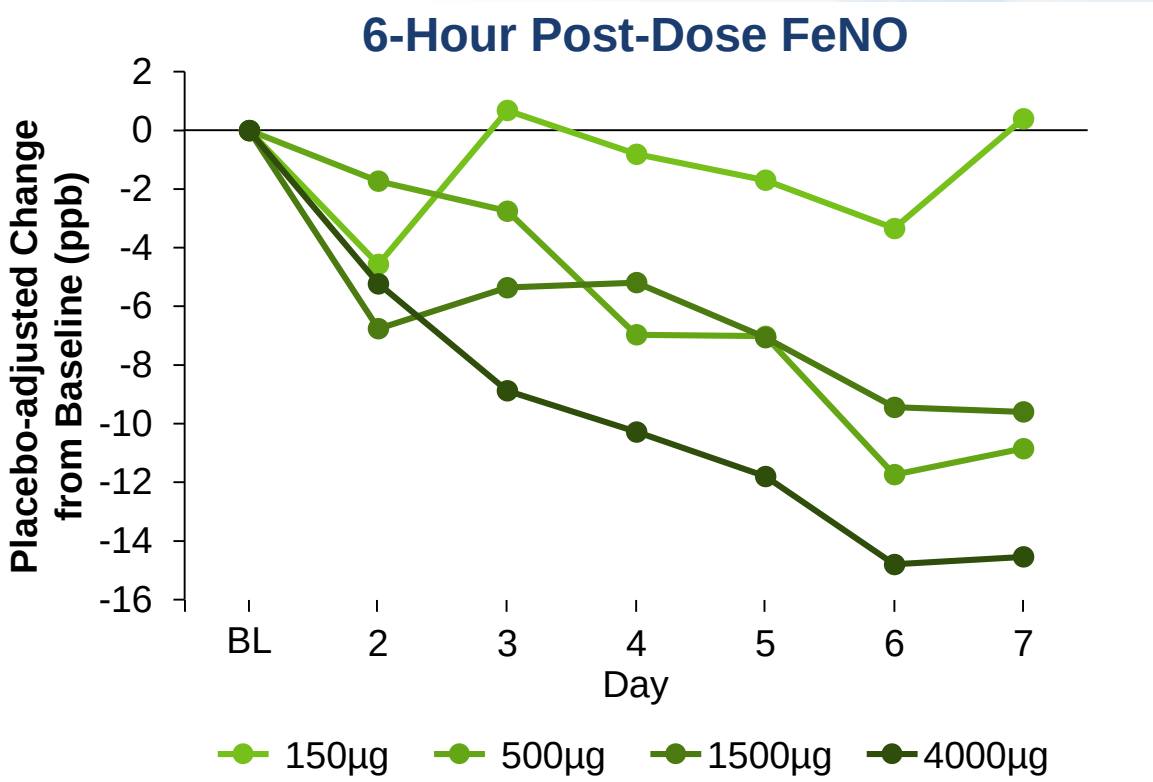
Key Findings

Favorable overall safety and tolerability	No evidence of local irritation or bronchoconstriction
	No severe or serious adverse events reported
	No clinically relevant changes in any safety laboratory measures
Minimal systemic exposure	Low plasma levels after single and 7-consecutive day doses
	Consistent with preclinical data and organ-selective design of compound
Biologic activity in lungs of patients with mild asthma after 7-day treatment	Pre- and 6-hour post-dose FeNO reductions at all doses >150 µg vs placebo
	>10 ppb reduction in pre-dose FeNO on Day 7 for all doses >150 µg
	Data suggest TD-8236 has 24-hour biological activity

Data demonstrated evidence of biological activity in the lung with minimal systemic exposure

FeNO, fractional exhaled nitric oxide.

TD-8236: Preliminary Positive FeNO Data in Patients with Mild Asthma & Elevated FeNO Levels at Baseline



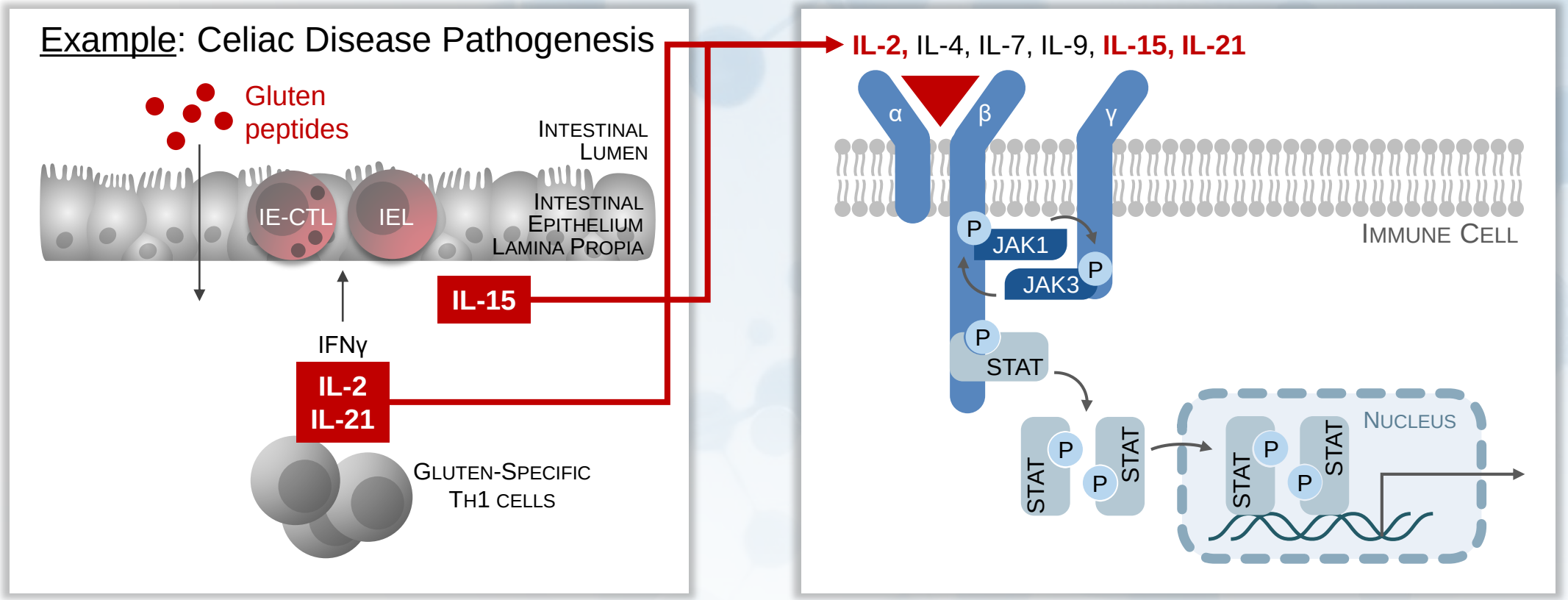
- FeNO is an established disease activity biomarker in asthma
- Reduction in FeNO associated with a decrease in airway inflammation
- Evidence of biological activity at 500 µg, 1500 µg, and 4000 µg, distinct from placebo and 150 µg dose groups
- FeNO data indicate dose response

Plan to initiate lung allergen challenge study 4Q19

FeNO, fractional exhaled nitric oxide.

TD-5202: Gut-selective Irreversible JAK3 Inhibitor

JAK3-DEPENDENT CYTOKINES PLAY CENTRAL ROLE IN PATHOGENESIS OF T-CELL MEDIATED DISEASE



- Proof-of-relevance for T-cell mediated disease from positive Phase 2 data with systemic JAK3 inhibitor in alopecia areata[1]
- Localized JAK3 inhibition important to avoid systemic immunosuppression (genetic JAK3 deficiency leads to severe immunodeficiency)
- Phase 1 study of TD-5202 in healthy volunteers underway

IE-CTL, intraepithelial cytotoxic lymphocyte; IEL, intraepithelial lymphocyte.
Figure adapted from Jabri B and Sollid L. J Immunol 2017;198:3005-14.
[1] Phase 2a study of PF-06651600; Pfizer.

YUPELRI®: Commercial Launch Underway

FDA-APPROVED FOR THE MAINTENANCE TREATMENT OF COPD

Unmet need for nebulized LAMA therapy

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

Enduring patient niche

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

Significant market opportunity

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

First and only once-daily bronchodilator delivered via nebulizer

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YUPELRI® (revefenacin) inhalation solution. Approved for the maintenance treatment of patients with COPD. COPD = Chronic Obstructive Pulmonary Disease.
[1] Global Strategy for Diagnosis, Management, and Prevention of COPD. [2] Suboptimal Inspiratory Flow Rates Are Associated with COPD and All Cause Readmissions. Loh et al., Annals of ATS 2017. [3] TBPH market research (N = 160 physicians); Refers to US COPD patients. [4] 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. LAMA, long-acting muscarinic antagonist. PIFR, peak inspiratory flow rate, LA, long-acting. LABA, long-acting beta agonist.

Partnership with Mylan Brings Commercial Strength in Nebulized Opportunity

Combined sales infrastructures cover
Hospital, Hospital Discharge and Home Health settings

Targeting HCPs at key intersections in the patient's disease management process

- Hospital is an important site of care for patients with worsening of COPD symptoms
- Theravance Biopharma's established hospital-focused sales force is targeting the inpatient setting
- Theravance Biopharma partners with institutions to transition appropriate patients from hospital to home on YUPELRI®
- Mylan's role is to ensure patients remain on YUPELRI® for maintenance therapy in the outpatient setting

HD = hospital discharge
HCPs = health care providers

YUPELRI® Launch Update

ENCOURAGING INITIAL MARKET RESPONSE

FORMULARY

70 Wins
(equates to 196 accounts)

~60 Reviews Scheduled
(>300 potential accounts)

100% medical support
requests **fulfilled** <30 days

PATIENT

Field force productivity goals exceeded

~21,000 patients prescribed
(thru Q3 2019)

ACCESS

100% Medicare Part B [1]

~50% Commercial

Permanent J-CODE issued
(effective July 1, 2019)

- Majority of YUPELRI® volume flows through durable medical equipment (DME) channel [2]; remaining volume flows through hospitals, retail and long-term care pharmacies
- WAC: $1,030 per month (or ~$34 per day)

[1] For patients with supplemental insurance
[2] Approximately 3 month lag in data capture

Third Quarter 2019 Financial Highlights

WELL CAPITALIZED WITH $353M[1] AS OF SEPTEMBER 30, 2019

($, in thousands)	Three Months Ended September 30	
	2019	2018
	(Unaudited)	
Product sales	-	3,849
Collaboration revenue	8,836	8,989
Mylan collaboration agreement	3,591	-
Total revenue	**12,427**	**12,838**
Cost of goods sold	-	705
Research and development[2]	52,006	52,693
Selling, general and administrative[2]	25,622	21,890
Total costs and expenses	**77,628**	**75,288**
Loss from operations	**(65,201)**	**(62,450)**
Share-based compensation expense:		
Research and development	6,458	6,294
Selling, general and administrative	6,561	5,452
Total share-based compensation expense	**13,019**	**11,746**
Operating loss excluding share-based compensation	**(52,182)**	**(50,704)**

Full-year Operating Loss Guidance[3]: $200M to $210M

[1] Cash, cash equivalents, marketable securities, and restricted cash. [2] Amounts include share-based compensation. [3] Operating loss excluding share-based compensation. Operating loss guidance does not include royalty income for TRELEGY ELLIPTA which the Company recognizes as non-operating income. Future financial guidance could be impacted by factors including, but not limited to our share of U.S. profits and losses related to the commercialization of YUPELRI, potential future business development collaborations as well as the timing and cost of clinical studies associated with its key programs.

GSK's TRELEGY ELLIPTA

FIRST AND ONLY ONCE-DAILY SINGLE INHALER TRIPLE THERAPY

Economic interest in TRELEGY ELLIPTA

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

Growth continues after first full year on market

- Prescriptions achieved ~31% share of COPD market
- Available in 38 markets, including Japan
- China launch expected 4Q19
- sNDA submitted to FDA supporting revised labelling on reduction in risk of all-cause mortality compared with ANORO in patients with COPD
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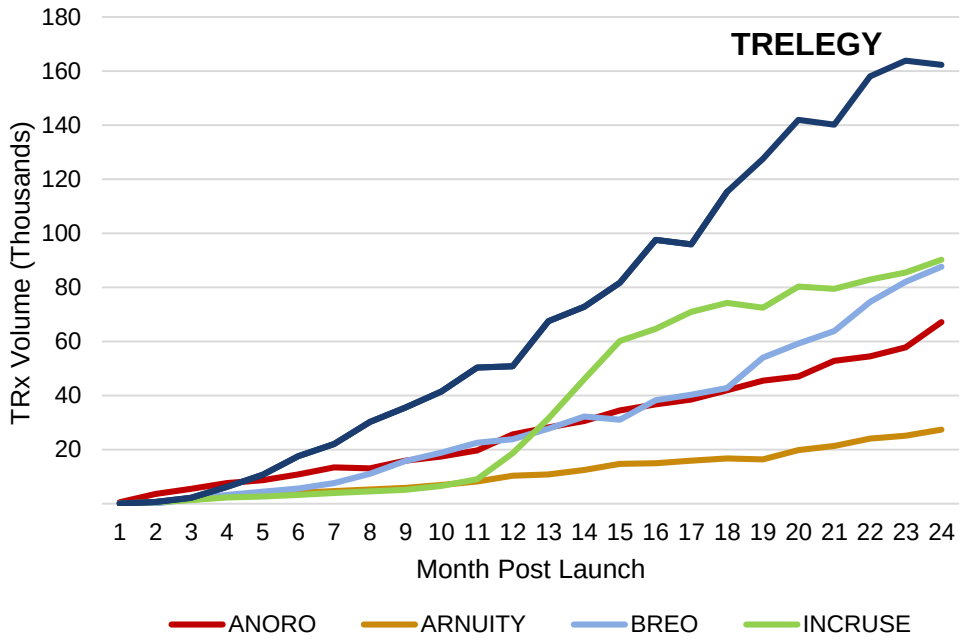

Launched in U.S. in November 2017

Source: GSK, IQVIA NPA weekly TRx data. This information is an estimate derived from the use of inform under license from the following IQVIA information service: NPA for the time period Sept 2013 through June 2019. IQVIA expressly reserves all rights, including rights of copying, distribution, & republication.

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sNDA: supplemental new drug application

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