

Verona Pharma



Breathtaking science

Developing respiratory drugs for better quality of life

September 2019

Nasdaq: VRNA

AIM: VRP

www.veronapharma.com



Forward-looking statements

This presentation contains “forward-looking” statements that are based on the beliefs and assumptions and on information currently available to management of Verona Pharma plc (together with its consolidated subsidiaries, the “Company”). All statements other than statements of historical fact contained in this presentation are forward-looking statements. Forward-looking statements include information concerning the initiation, timing, progress and results of clinical trials of the Company’s product candidate, the timing or likelihood of regulatory filings and approvals for of its product candidate, and estimates regarding the Company’s expenses, future revenues and future capital requirements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other comparable terminology.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These risks, uncertainties and other factors include those under “Risk Factors” in the Company’s annual report on Form 20-F filed with the Securities and Exchange Commission (the “SEC”) on March 19, 2019, and in its other reports filed with the SEC. Forward-looking statements represent the Company’s beliefs and assumptions only as of the date of this presentation. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, the Company assumes no obligation to publicly update any forward-looking statements for any reason after the date of this presentation, or to conform any of the forward-looking statements to actual results or to changes in its expectations.

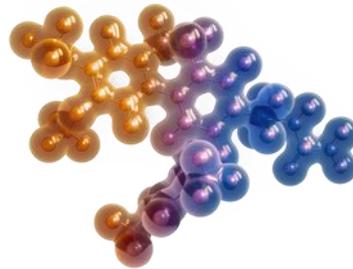
This presentation also contains estimates, projections and other information concerning the Company’s business and the markets for the Company’s product candidate, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research, or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, the Company obtained this industry, business, market and other data from reports, research surveys, clinical trials studies and similar data prepared by market research firms and other third parties, from industry, medical and general publications, and from government data and similar sources.



Ensifentrine is a first-in-class candidate for respiratory disease

Plan to enter global Phase 3 studies in 2020

Inhaled PDE₃ and PDE₄ inhibitor

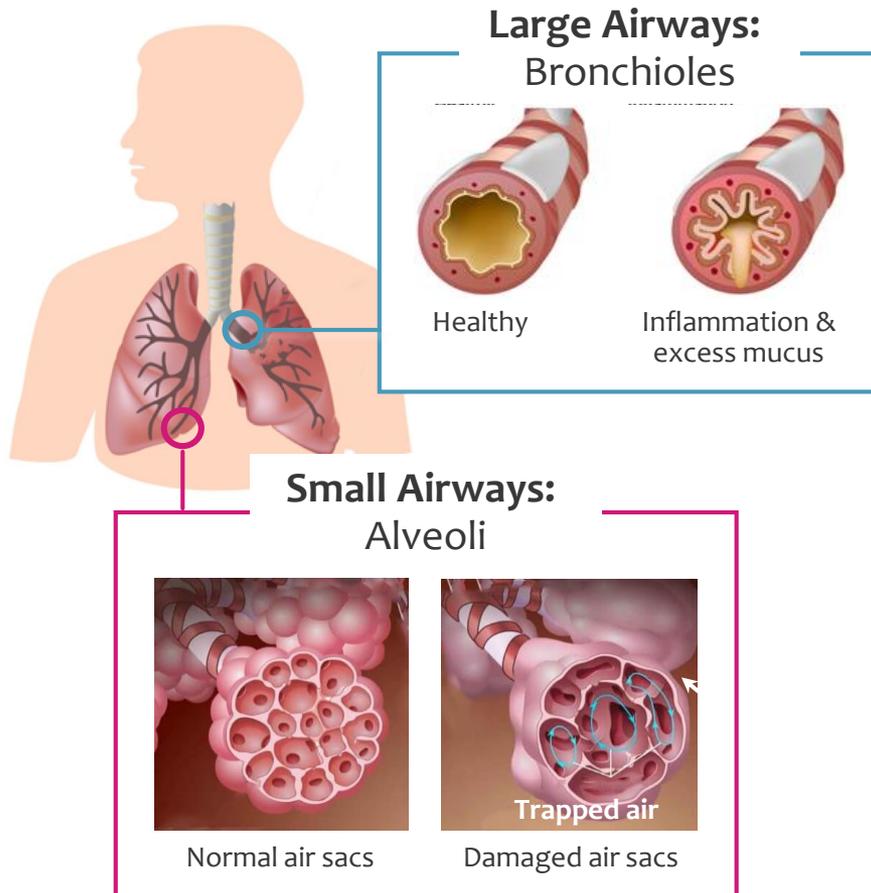


Bronchodilator and anti-inflammatory agent
in a single compound

**A very significant commercial opportunity,
US COPD market is large and growing**



COPD: a significant unmet need



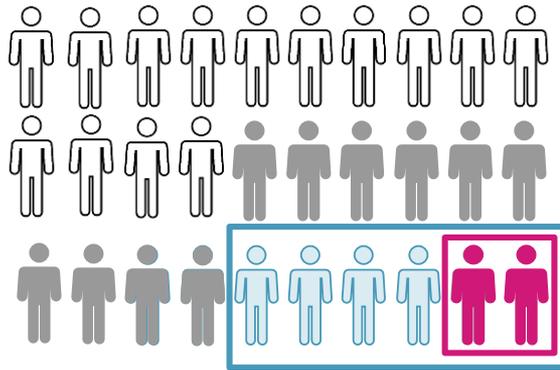
Consequences and symptoms

- Debilitating breathlessness
- Coughing, sputum
- Poor lung function
- Fatigue / struggle with daily tasks
- Exacerbations / flare-ups



COPD: The silent epidemic

~30 million patients in US alone



~16M
Diagnosed
~6M
Treated
~2m
Severe/
very severe

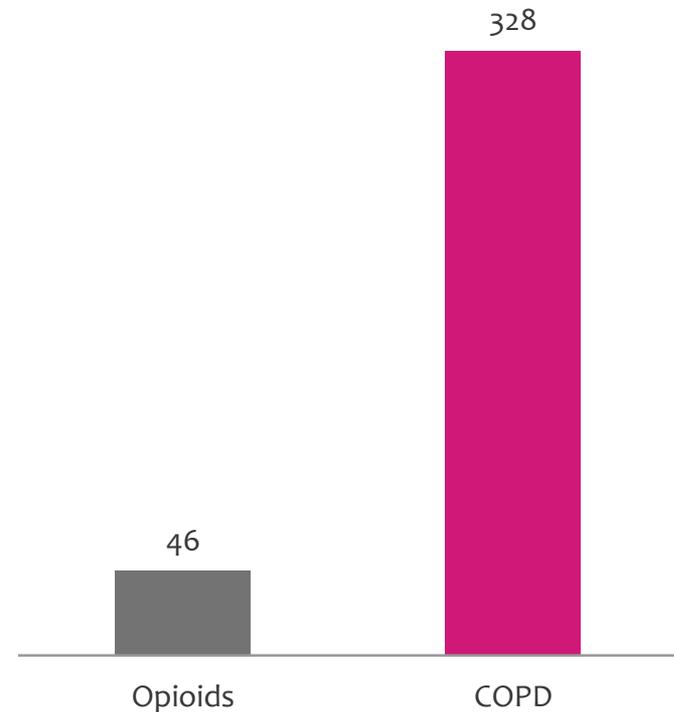
Cost

~\$50 billion/year by 2020

Indirect & direct

3rd leading medical cause of death by disease in US

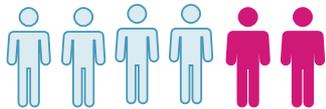
Deaths/Day



Sources: COPD Foundation. Sullivan J, et al. *Chronic Obstr Pulm Dis.* 2018; 5(4): 324-333.

Nebulized ensifentrine in COPD: Potential \$1 billion market opportunity in US

6M treated



2M on dual/triple therapy

800,000 symptomatic patients on dual bronchodilator/triple therapy
need additional treatment

Current market data	Potential patient population
About 1/3 of moderate to severe patients use nebulizer	>250,000
Avg. Annual WAC Price of existing nebulized COPD drugs	\$12,000

Attractive Medicare Part B Reimbursement

Top-prescribing physicians can be reached with targeted specialist salesforce

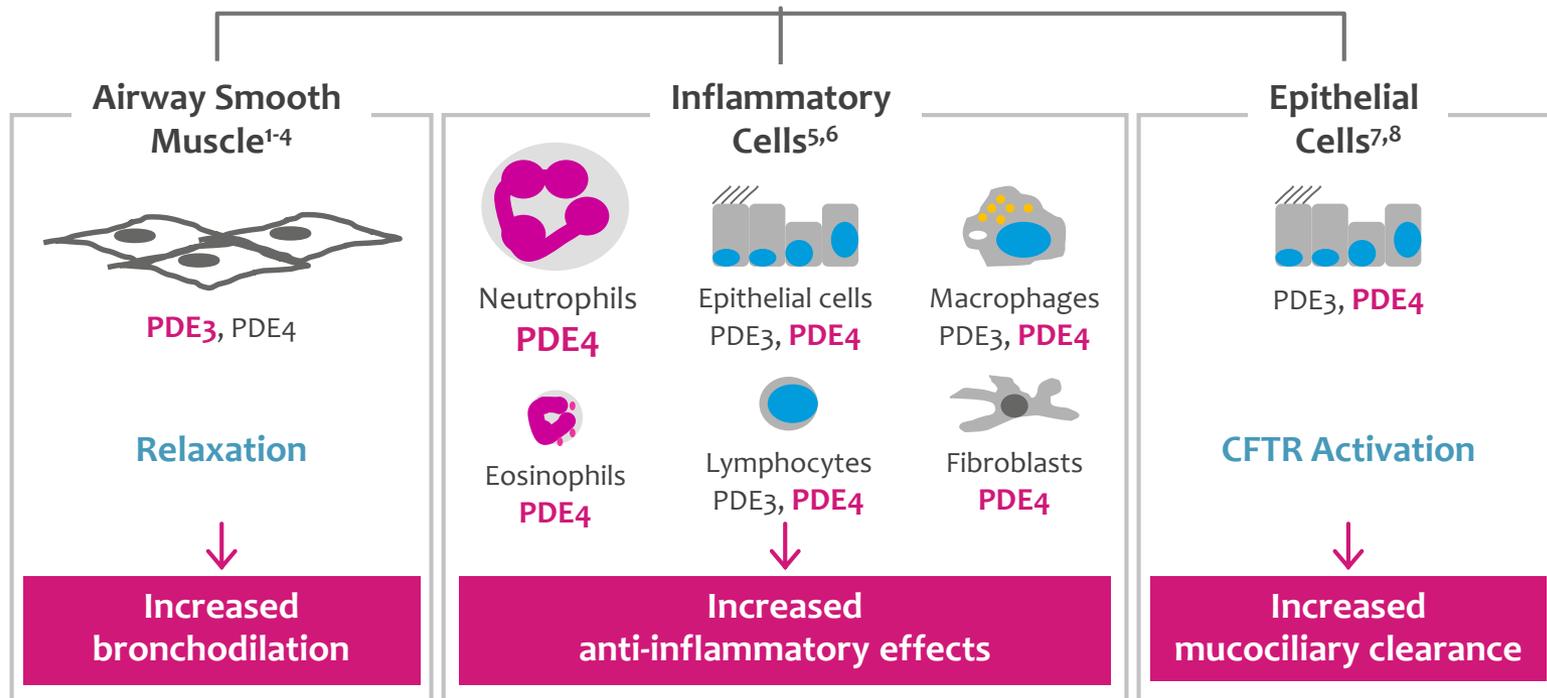
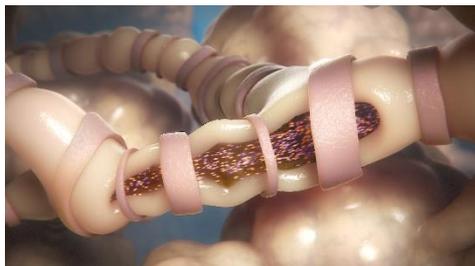
Ensifentrine first-in-class candidate: Bronchodilator and anti-inflammatory in a single compound



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Ensifentrine (RPL554)
Dual PDE3 and PDE4 enzyme inhibitor

Impacts 3 Key Mechanisms in Respiratory Disease:



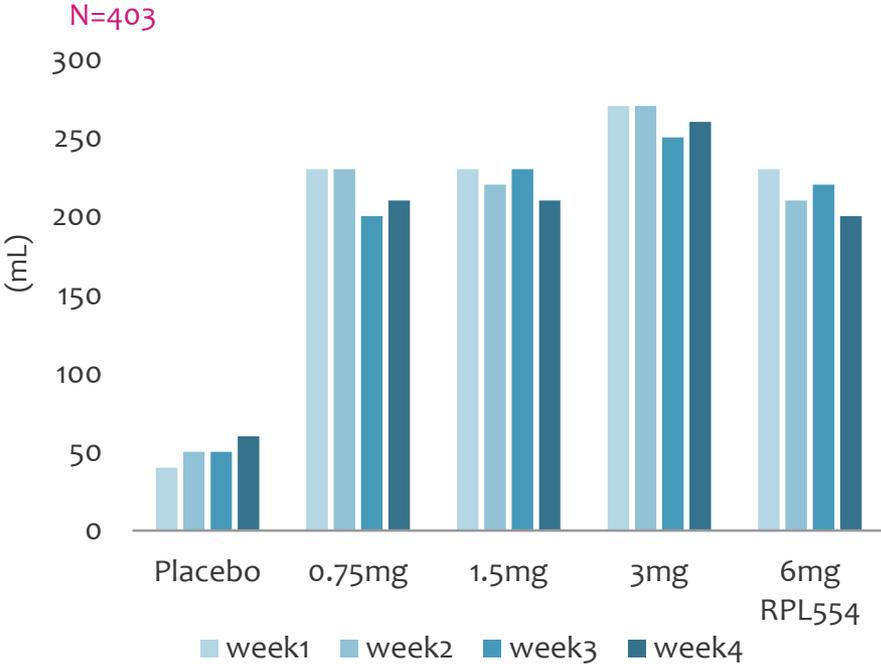
1. Calzetta L, et al. J Pharmacol Exp Ther 2013;346:414-23; 2. Calzetta L, et al. Pulm Pharmacol Ther 2015;32:15-23; 3. Matera MG, et al. Am J Respir Crit Care Med 2013;187:A1495; 4. Venkatasamy R, et al. Br J Pharmacol 2016;173:2335-51; 5. Boswell-Amith V, et al. J Pharmacol Exp Ther 2006;318:840-8; 6. Franciosi LG, et al. Lancet Respir Med 2013;1:714-27; 7. Schmidt D, et al. Br J Pharmacol 2000;131:1607-18; 8. Turner MJ, et al. Am J Physiol Lung Cell Mol Physiol 2016;310:L59-70.



Dual Bronchodilator and Anti-Inflammatory Effect

Bronchodilator

Lung Function Improvement in Peak FEV₁; p<0.001

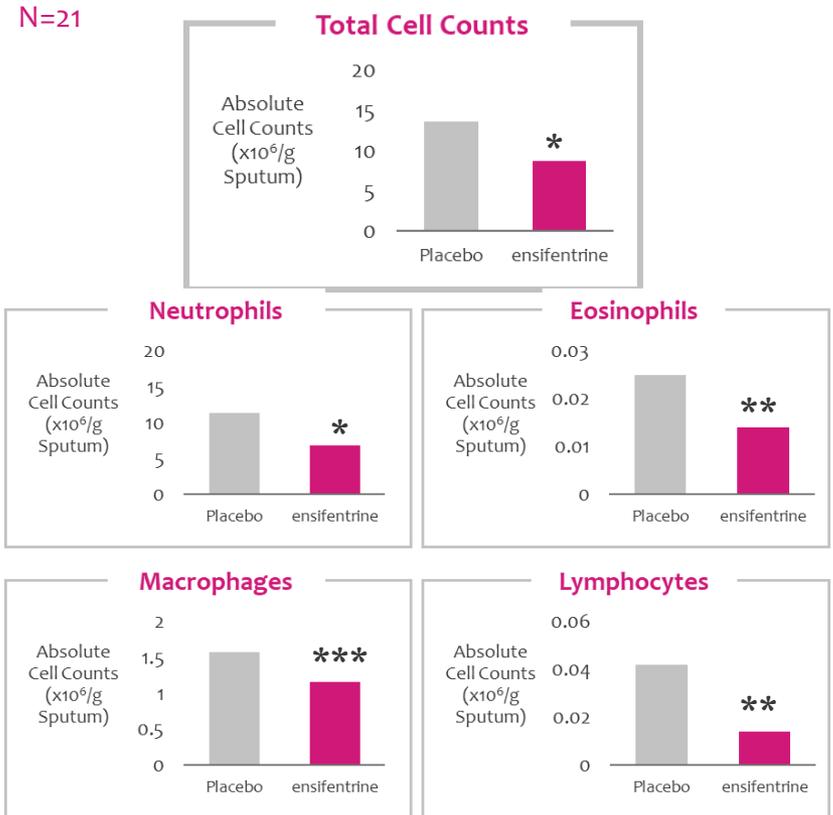


4-week Phase 2b study in moderate-severe COPD patients, no background bronchodilator therapy

*Peak Change from Day 1 in Baseline in FEV₁ (mL) on Day 28, Week 4, Primary endpoint was met

Anti-Inflammatory

Broad Spectrum Reduction in Cell Counts



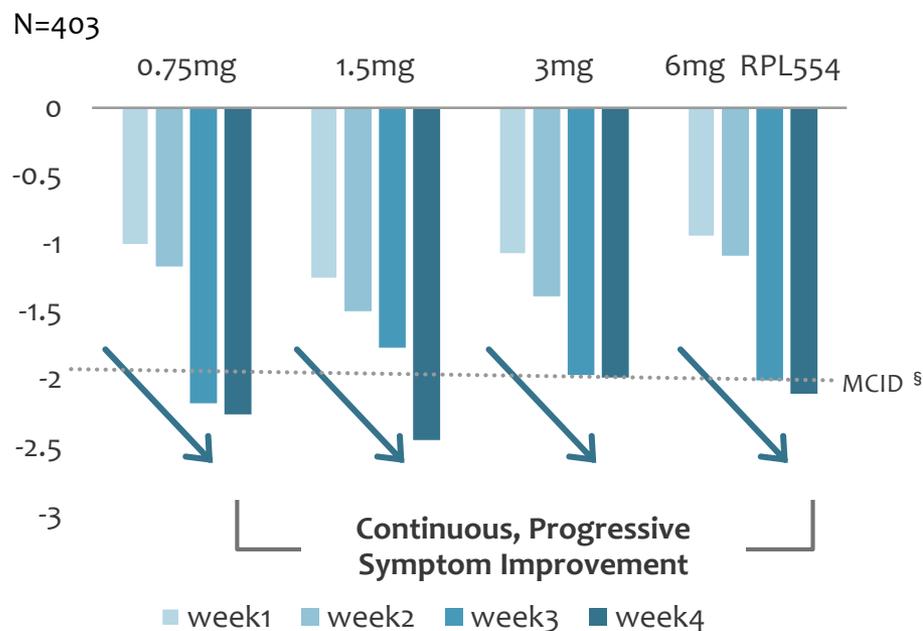
Phase 1 trial in 21 healthy subjects

* p= 0.002; ** p=0.001; ***p = 0.044

Bronchodilator + anti-inflammatory = Potential to reduce symptoms and exacerbations*

Symptom relief – data reported March 2018

Total Score E-RS: COPD by Week, $p < 0.02^{**}$



** Placebo corrected

§ Minimal clinically important difference

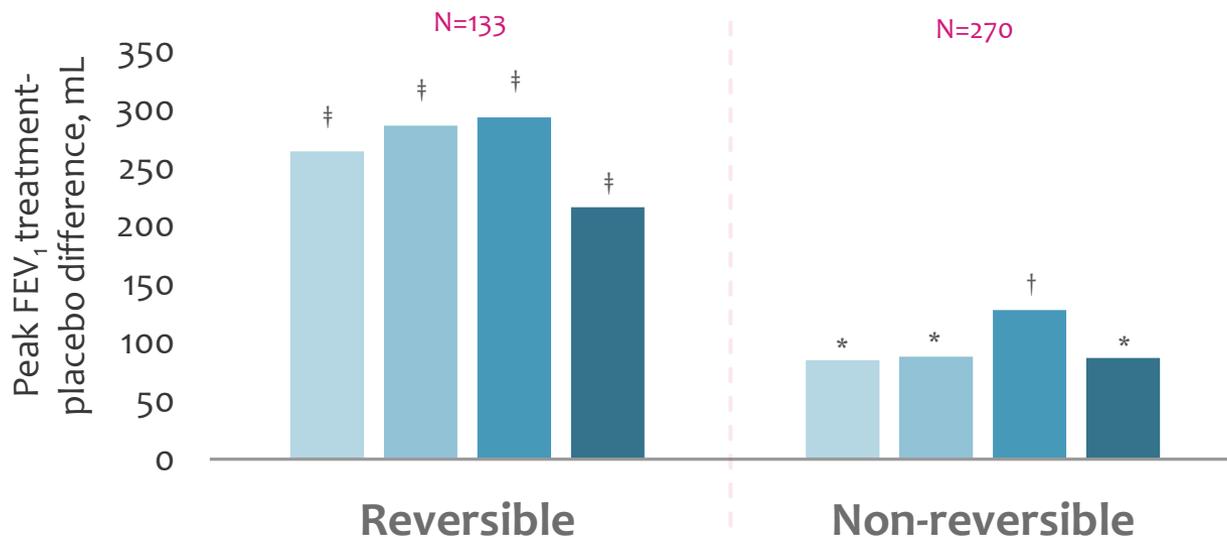
Symptom improvement believed to be due to anti-inflammatory effect

Bronchodilation and symptom improvement are independent



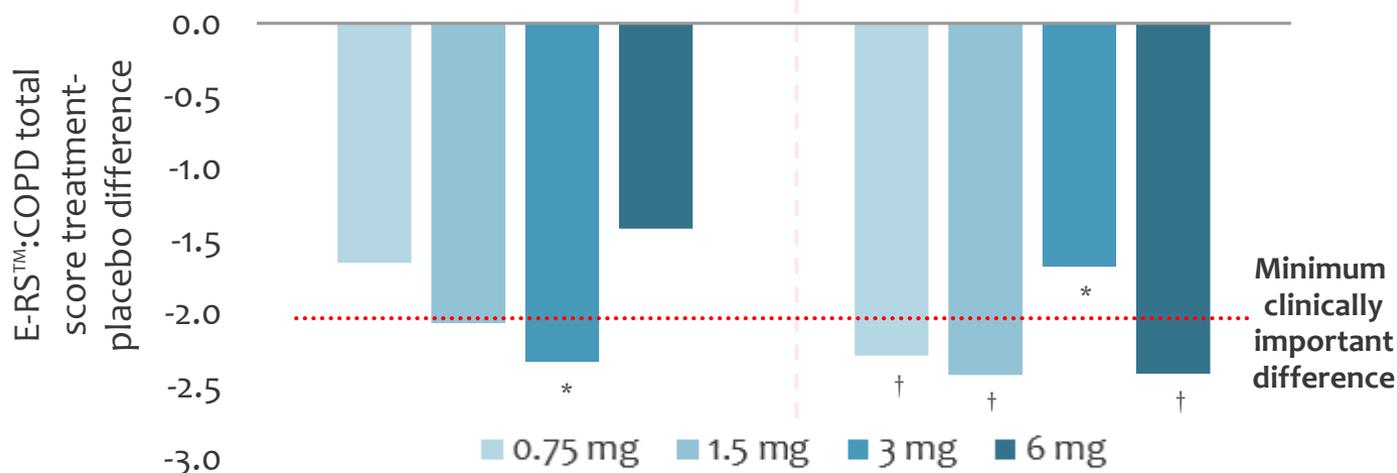
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Lung function
Peak FEV₁ at Week 4



Reversibility defined as pre- to post-salbutamol change in FEV₁ at screening of ≥ 200 mL and $\geq 12\%$
Typically >70% of COPD patients are Non-reversible

Symptom relief
at Week 4
(Progressive symptom relief correlates with Anti-Inflammatory effect)



4-week Phase 2b study in 403 moderate-severe COPD patients, no background bronchodilator therapy.

*p<0.05; †p<0.01; ‡p<0.001. Data are least squares mean ensifentrine-placebo differences.

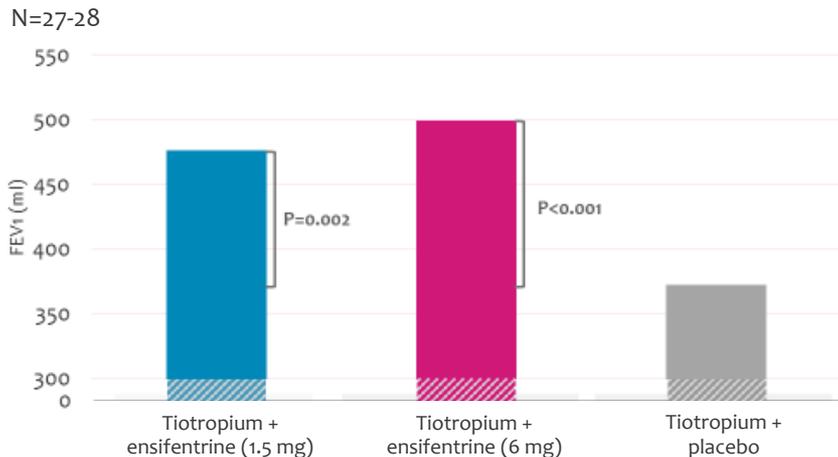
Phase 2 as add-on to LAMA (tiotropium / Spiriva®)

(Study CO-202, Reported Sep 2017)

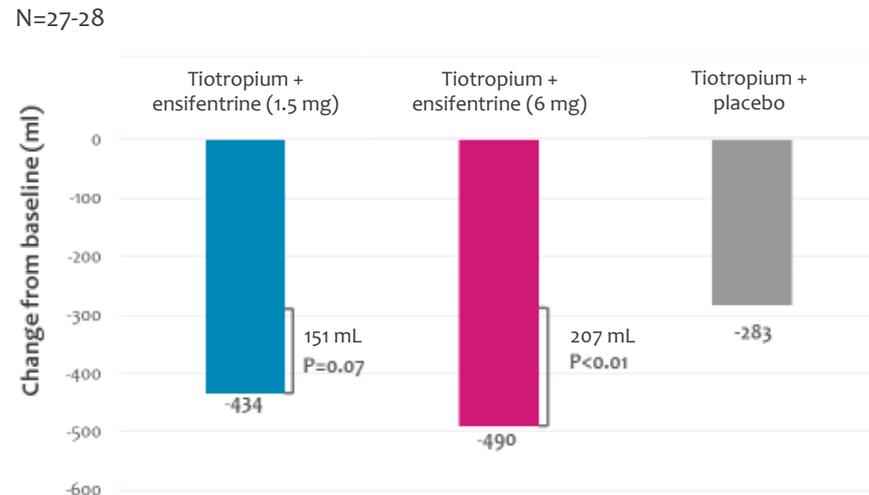


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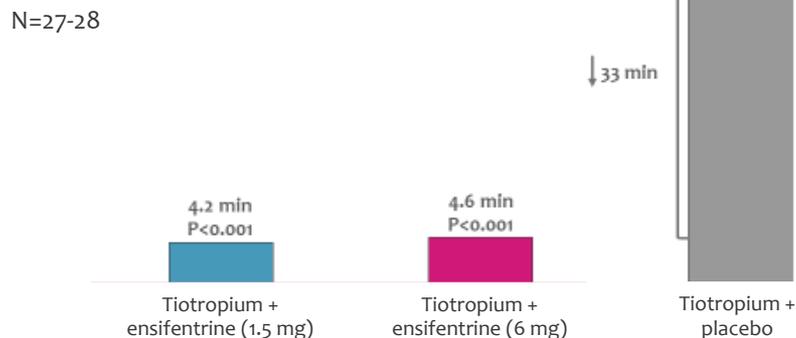
Change in Morning Peak FEV₁ from Baseline (mL), Day 3



Reduction in Hyperinflation (mL) on Day 2 (Morning)



Median Time to Onset on Day 3 (≥ 10% Improvement in FEV₁; mins)



- Additional improvement in peak FEV₁
- Reduction of hyperinflation - typically correlated with improvement in symptoms
- Rapid onset of action
- Well tolerated

Reported September 2017

Ensifentrine as add-on to SAMA or SABA

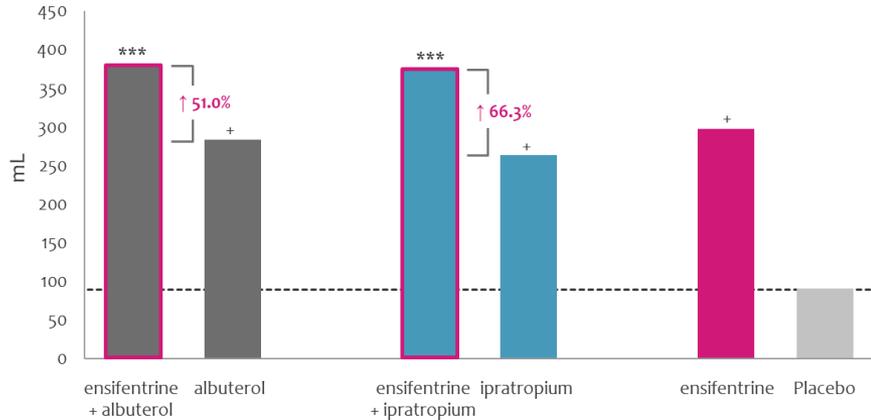
(Study RPL554-2015-009, reported May 2016)



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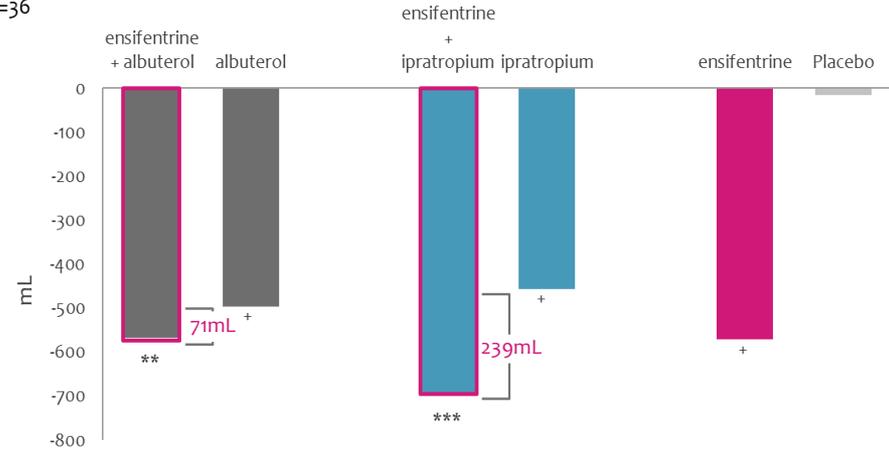
Peak Change from Baseline in FEV₁(L)

N=36



Change from Baseline in Residual Volume at 1 Hour

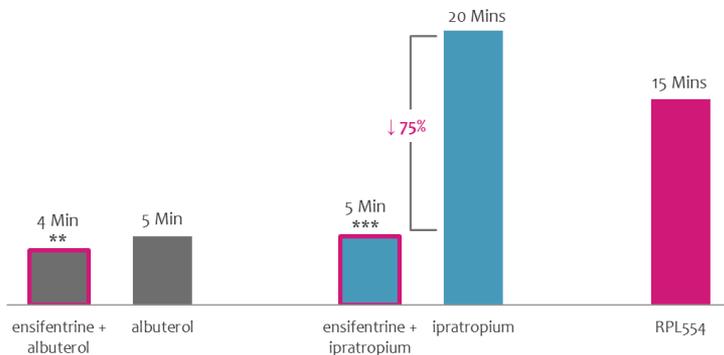
N=36



Reduction in Hyperinflation Is Typically Correlated with Improvement in Shortness of Breath

Time to Onset (10% improvement in FEV₁) (mins)

N=36



- Additional improvement in peak FEV₁
- Reduction of hyperinflation - typically correlated with improvement in symptoms
- Rapid onset of action
- Well tolerated

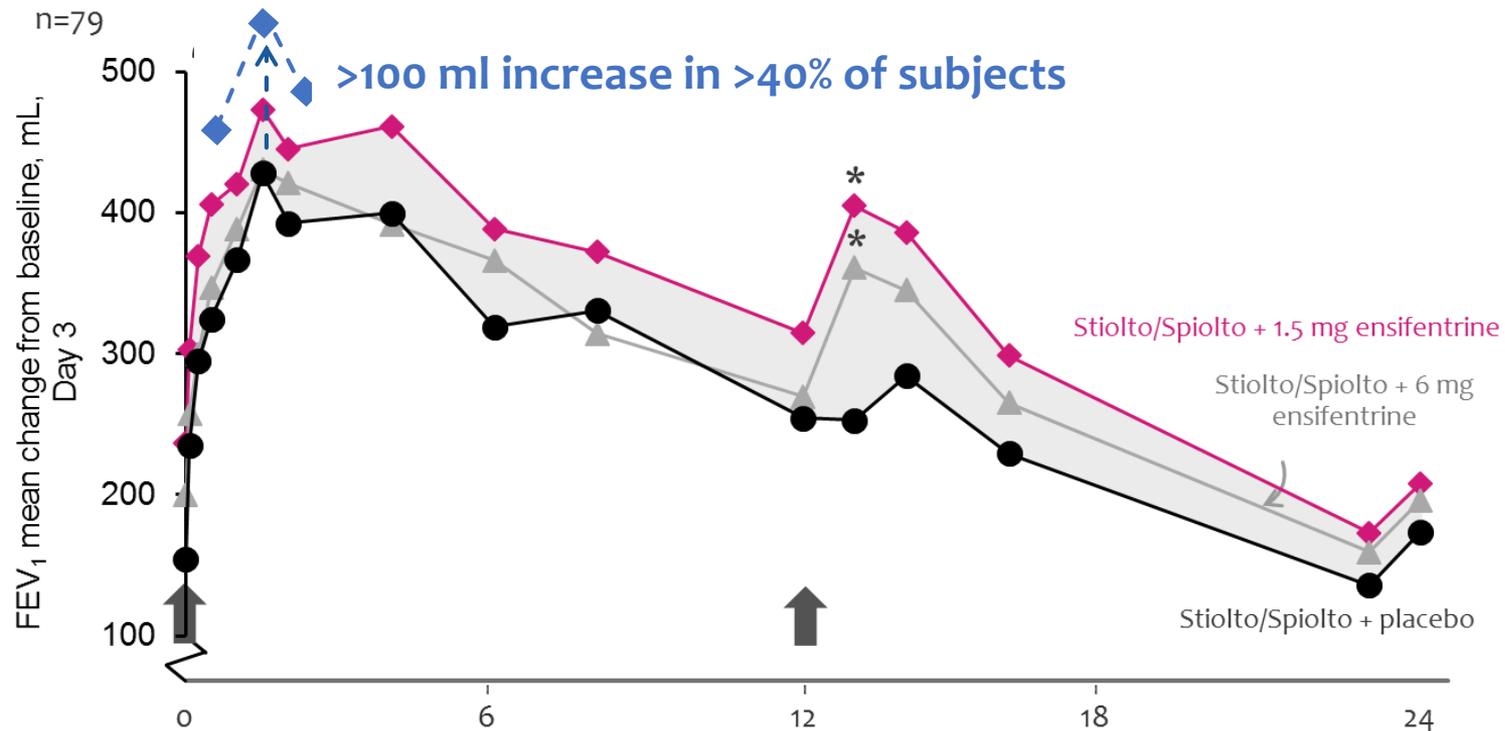
Source: RPL554-009-2015

+ p<0.001 vs placebo

** p<0.01 vs. albuterol alone

*** p<0.001 vs. albuterol or ipratropium alone

Larger bronchodilator response in COPD patients in whom bronchodilators are less effective



Even larger bronchodilator response in the 70% of COPD patients responding less well to current treatment (= non-reversible patients)

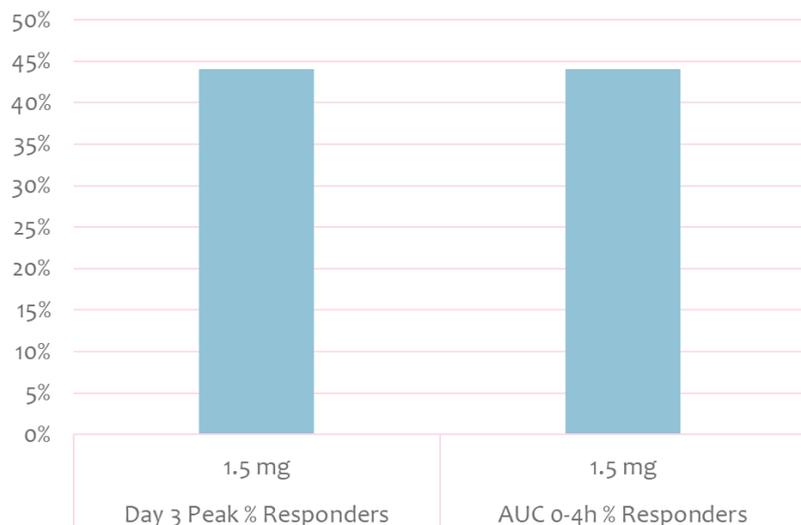
Learnings from 3 day study informs Ph3 positioning study in COPD

Results from post hoc analysis

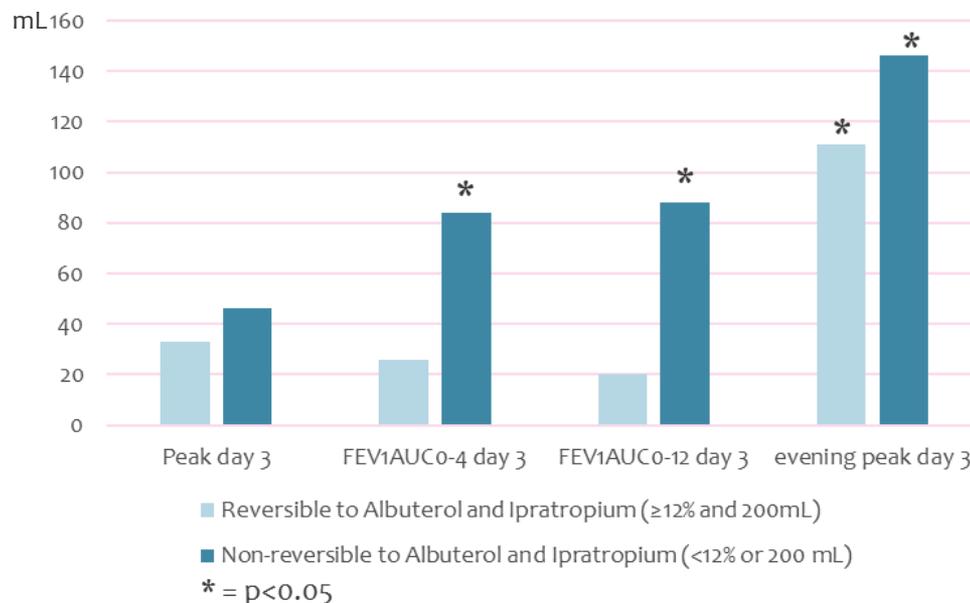


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>40% of patients had ≥ 100 mL increase in peak FEV₁ vs placebo



1.5 mg ensifentrine: **additional response in non-reversible patients** vs. those reversible to beta2 agonist and muscarinic antagonist



Greater response seen in patients who are less responsive to existing classes of bronchodilators
Substantial group of patients show significant response, >100mL improvement in Peak FEV₁



Phase 2b, 4 week study as add-on to tiotropium to inform EoP2, Ph3 and commercial positioning

Study design

- **Purpose:** Investigate dose response of ensifentrine in moderate to severe COPD patients who are symptomatic despite treatment with tiotropium
 - **Facilitate dose selection for Phase 3** (0.375, 0.75, 1.5 and 3 mg vs placebo)
- **Population:** Moderate to severe COPD
 - **Patients will be required to be symptomatic** at randomization; mMRC ≥ 2
 - Stable tiotropium as required background therapy (2-week run-in on tiotropium Respimat)
- **Key Endpoints:** FEV₁ (peak, AUC, trough), E-RS symptoms

Recruitment initiated May 1st

Nebulized ensifentrine: Advancing towards Phase 3 with differentiated profile



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Phase 2: Establish activity + profile → Phase 3:

A. Pivotal studies:
Ph3 design and endpoints as in Ph2 studies

2 trials of 6 month duration,
one with 6 month safety extension

None or single bronchodilator
Background (1) + (2)

FEV1 and symptom improvement,
explore exacerbations in pooled
data

B. Positioning study:
Inform physicians and payors

Add-on treatment to
dual bronchodilators
/ triple therapy

① Monotherapy
(Dose Ranging)
400 pts
Bronchodilator + anti-inflammatory
Completed 2018

Add-on to
Single Therapy
(2 Ind. P2 Studies)
Bronchodilator
Completed 2017

② Add-on to
Single Therapy
(Dose Ranging)*
Bronchodilator +
anti-inflammatory*

Add-on to
Double/Triple
Therapy
Bronchodilator
Completed Jan 2019

End of Phase 2 Meeting
with FDA, target H1 2020

* Results expected in 4Q 2019/1Q2020

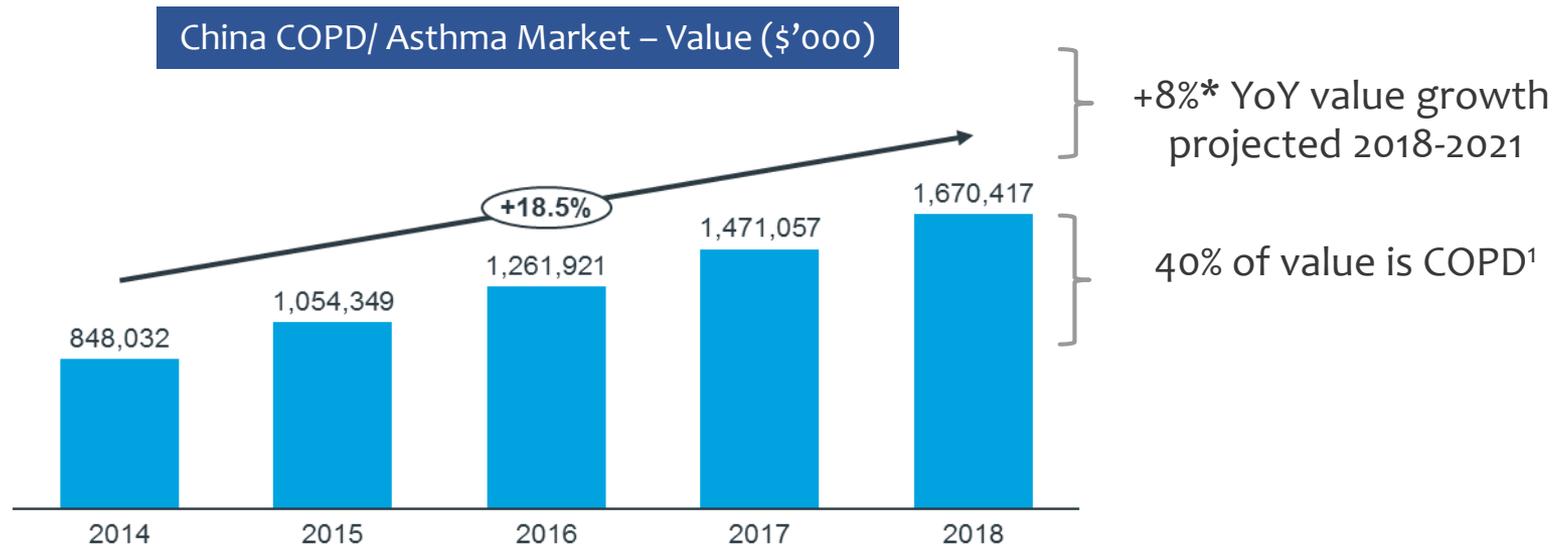


Strengthened Clinical Team for Phase 3

Key Hires in 2019 - 100 years late stage clinical development experience, primarily GSK respiratory

- **Kathy Rickard, MD** – Chief Medical Officer
 - Ex GSK, Circassia
 - Developed Advair[®], Anoro[®], Incruse[®], Breo[®]
- **Tara Rheault, PhD** – VP R&D Operations & Global Project Management
 - Ex GSK, IQVIA
 - Supported development of Nucala[®], Incruse[®], Breo[®] and Anoro[®]
- **Nina Church** – Executive Director of Global Clinical Development
 - Ex GSK, Parion
 - Supported development of Advair[®], Anoro[®], Flovent[®], Serevent[®] and Ventolin[®]
- **Nancy Herje** – Senior Director of Clinical Operations
 - Ex GSK, Aerocrine
 - Supported development of Flovent[®] and many other late stage programs

China: Large and Fast Growing COPD Market

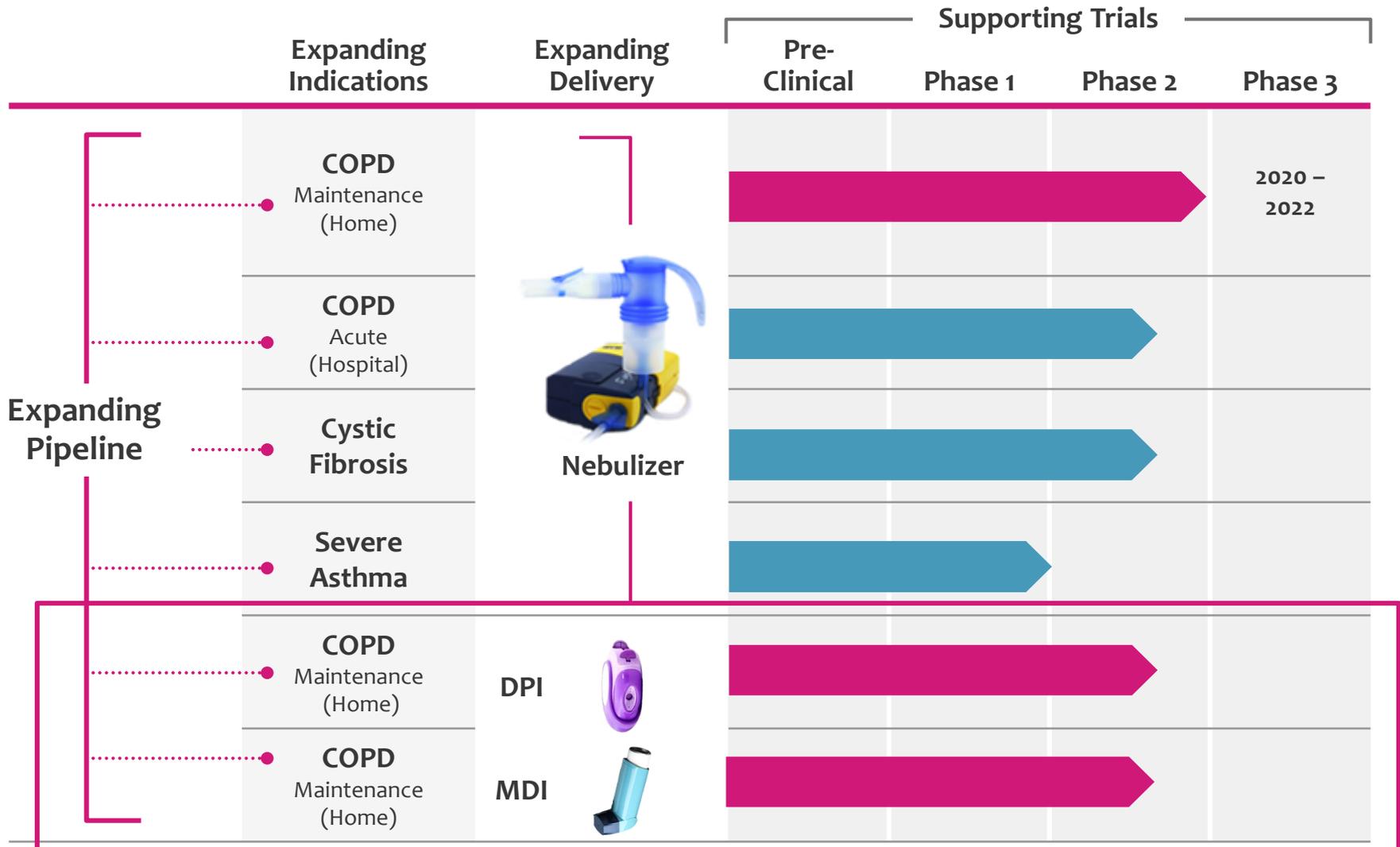


- Current COPD treated patient population: ~8 million (vs US 6M) with cigarette smoking and air pollution being the leading causes
- Hospital driven market ~90% of sales in terms of value (vs. US ~80% value in retail channel)
- ~15,000 hospital ‘nebulizer rooms’ supporting annual ~\$500M Pulmicort nebulized market

Enfentrine lifecycle: Expanding the pipeline over time

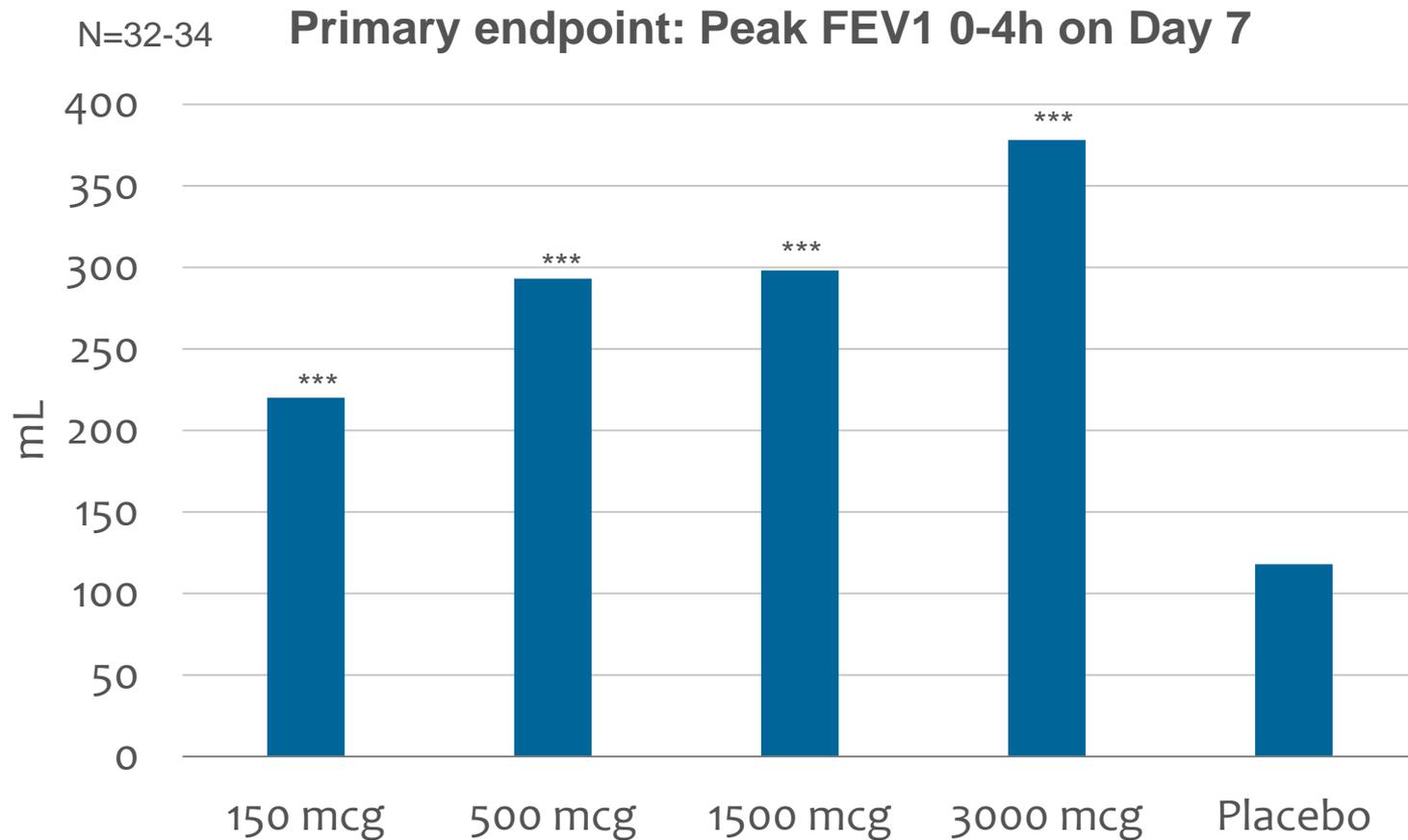


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Primary endpoint met: dry powder formulation of ensifentrine produced highly significant improvement in Peak FEV₁ in COPD

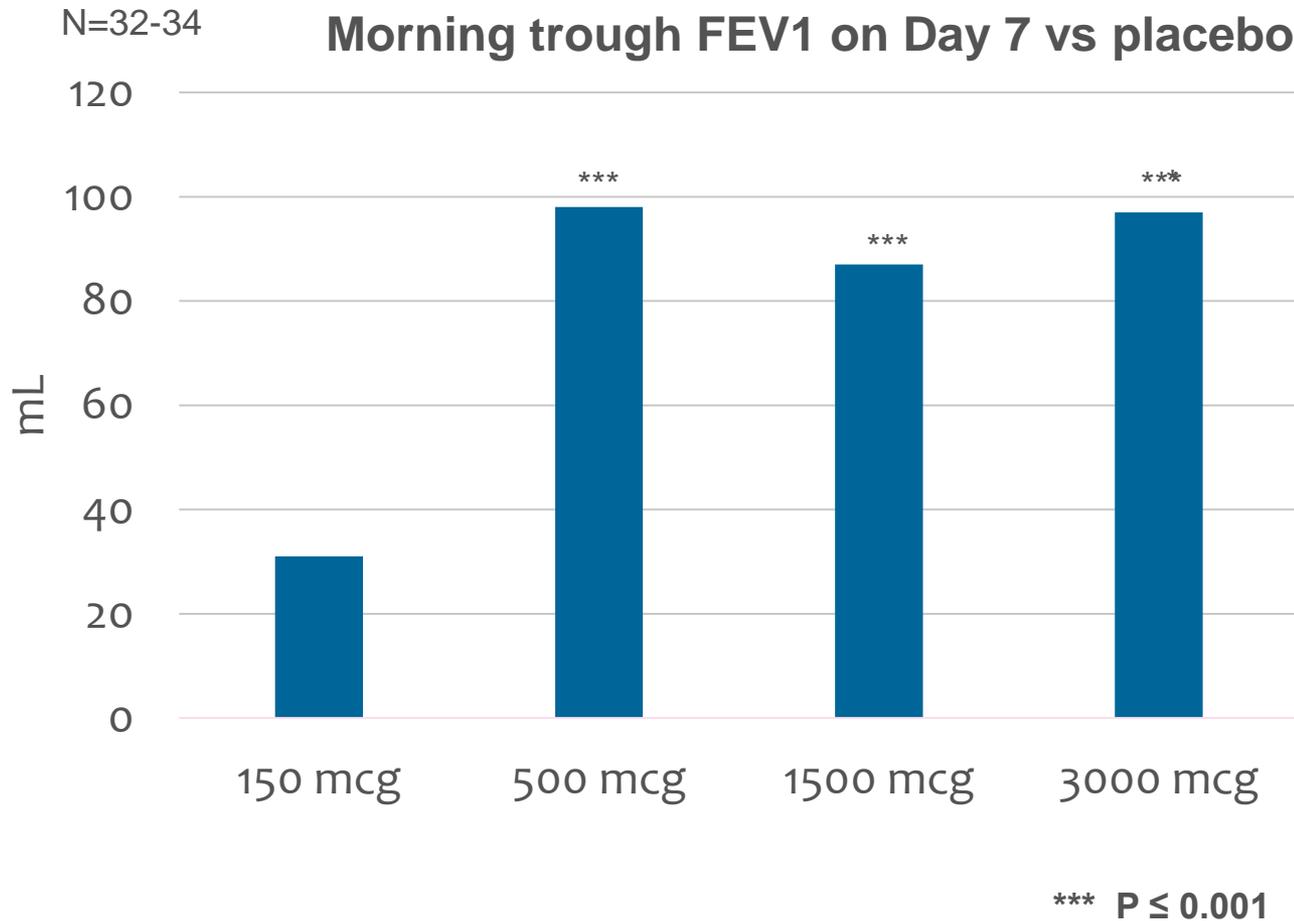
Clinically meaningful, statistically significant and dose-dependent bronchodilation



*** P ≤ 0.0001

Secondary end point met: Consistent Trough FEV₁ Response further support twice daily dosing

Statistically significant and meaningful improvement in trough FEV1

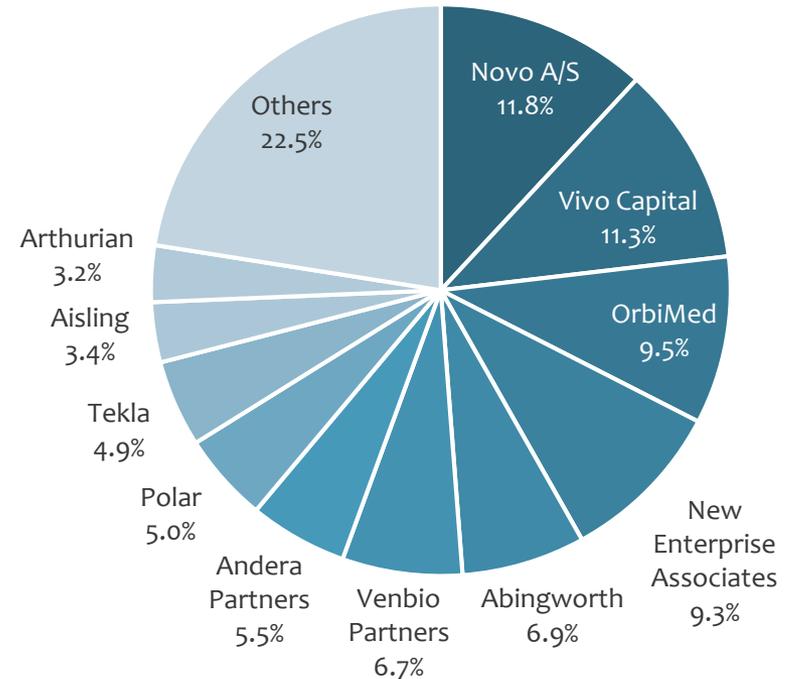


Backed by major healthcare investors

Financial overview June 30, 2019

Cash and cash equivalents	\$59.1M ¹
Operating expenses 1H19	\$25.2M ¹
Market cap	\$58.0M ²

Shareholdings³



Dual listed on Nasdaq and AIM markets

¹Exchange rate used (US dollars per pound sterling): June 28, 2019: \$1.2704
Cash and cash equivalents comprises cash + cash deposits > 3 months maturity
Cash and equivalents at June 30, 2019 amounted to £46.5M (\$59.1M)

²Current issued 105.3M shares or 13.2m ADSs, share price \$4.41 on August 9, 2019

³As disclosed to the Company in accordance with AIM Rule 26, or through s80 notices and 13F and 13G filings



Ensifentrine: Rich patent estate (until mid-2030s)

Robust Patent Portfolio

- Composition of matter – granted US, EU, Japan, other; expires 2020
- Polymorph – granted US, EU, Japan, other; expires 2031
- Formulations – granted US, EU, other; expires 2035
- Manufacturing, use, salt forms, combinations: granted and pending in US, EU, and other territories; expires 2031 – 2037
- Exploring additional IP opportunities

New chemical entity

- US: Market exclusivity up to 5 years post NDA approval
- EU: Market & data exclusivity up to 10 years post approval

Verona Pharma has Global Rights

Ensifentrine: Multiple value creation opportunities



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In COPD

Nebulized formulation in US

- 800,000 symptomatic patients on dual bronchodilator/triple therapy need additional treatment

Nebulized formulation in China

- Prevalence ~70 million COPD patients; potential large market for nebulized drugs as about 90% of drug sales are in the hospital

DPI or MDI formulation for COPD

- Large market, >5 million patients in US; partnering opportunity

In other indications

Cystic fibrosis

- Potential first anti-inflammatory drug, independent of CF mutation status

Severe Asthma

- Bronchodilator and anti-inflammatory agent, possibly before initiating more restrictive biologics treatments

Chronic cough

- Anti-inflammatory mechanism reduces cough and improves mucociliary clearance

Nebulizer first NDA filing in US planned 2022

Upside potential: China, DPI/MDI formulations and additional indications

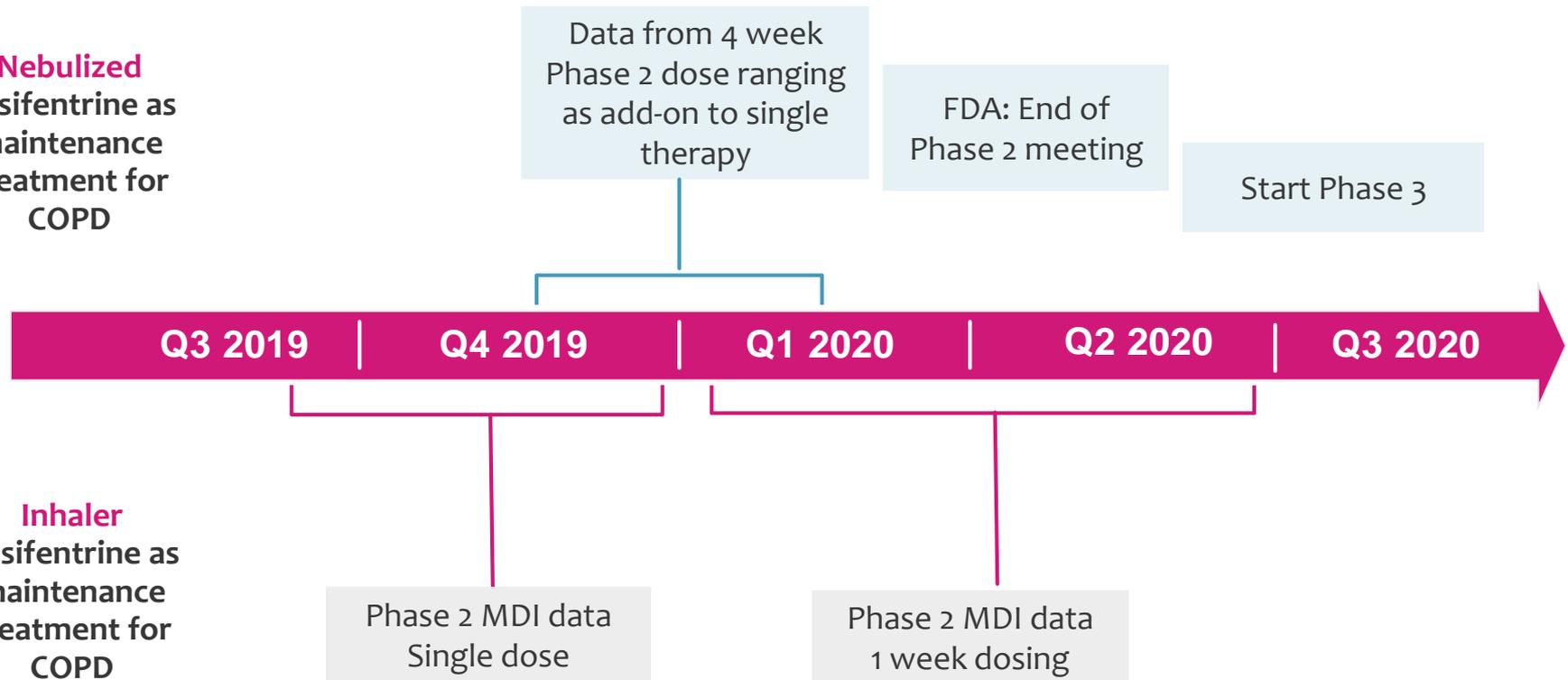
2019: Multiple significant milestones as ensifentrine advances towards Phase 3 in 2020



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Nebulized
ensifentrine as
maintenance
treatment for
COPD

Inhaler
ensifentrine as
maintenance
treatment for
COPD



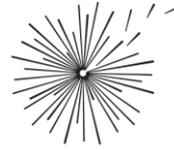
**Simple Phase 3 trial design, similar to Phase 2b studies,
to increase likelihood of regulatory success**

Ensifentrine: Promising novel treatment for patients with COPD



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- ✓ First-in-class PDE₃/4 inhibitor with **bronchodilator** and **anti-inflammatory** effects, **rapid onset of action** and **well tolerated**
 - ✓ Reduces **residual volume/air trapping**
- ✓ **Improves symptoms** in moderate to severe, symptomatic COPD patients on twice daily dosing
- ✓ **Novel Mode of Action improves lung function** in patients **poorly responsive to currently available bronchodilators**
 - ✓ **Targeting FDA End of Phase 2 Meeting 1H 2020**
- ✓ **Subsequently, advancing nebulized ensifentrine into Phase 3 trials** in patients symptomatic despite using standard COPD medications



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Thank you