

Verona Pharma



Breathtaking science

Developing respiratory drugs for
better quality of life



**Jefferies Global Healthcare Conference
June 2019**

**Nasdaq: VRNA
AIM: VRP
www.veronapharma.com**



Forward looking statements

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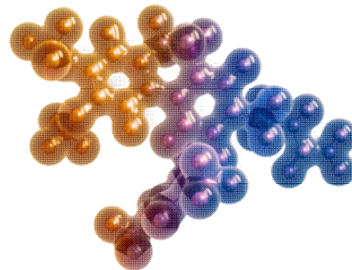
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Ensifentrine: First-in-class candidate for respiratory disease

Inhaled PDE₃ and PDE₄ inhibitor



Bronchodilator and anti-inflammatory agent
in a single compound

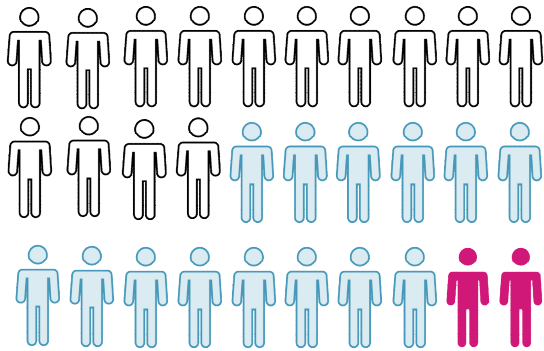
**A very significant commercial opportunity in
large and growing US COPD market**

Plan to enter global Phase 3 studies in 2020



COPD: The silent epidemic

~30 million patients in
US alone



~16M
Diagnosed

~2M
Severe/
very severe

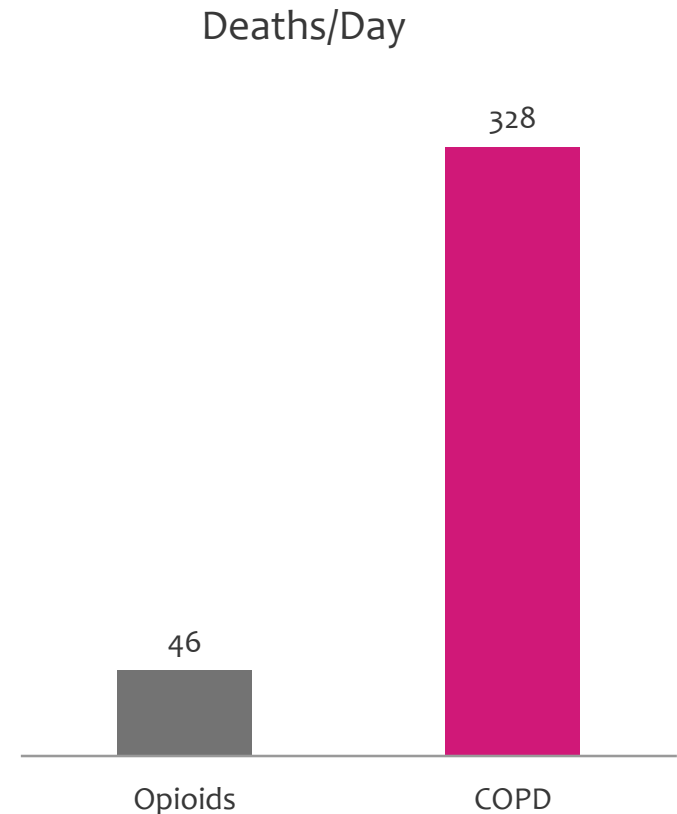
Cost

~\$50 billion/year by 2020

Indirect & direct

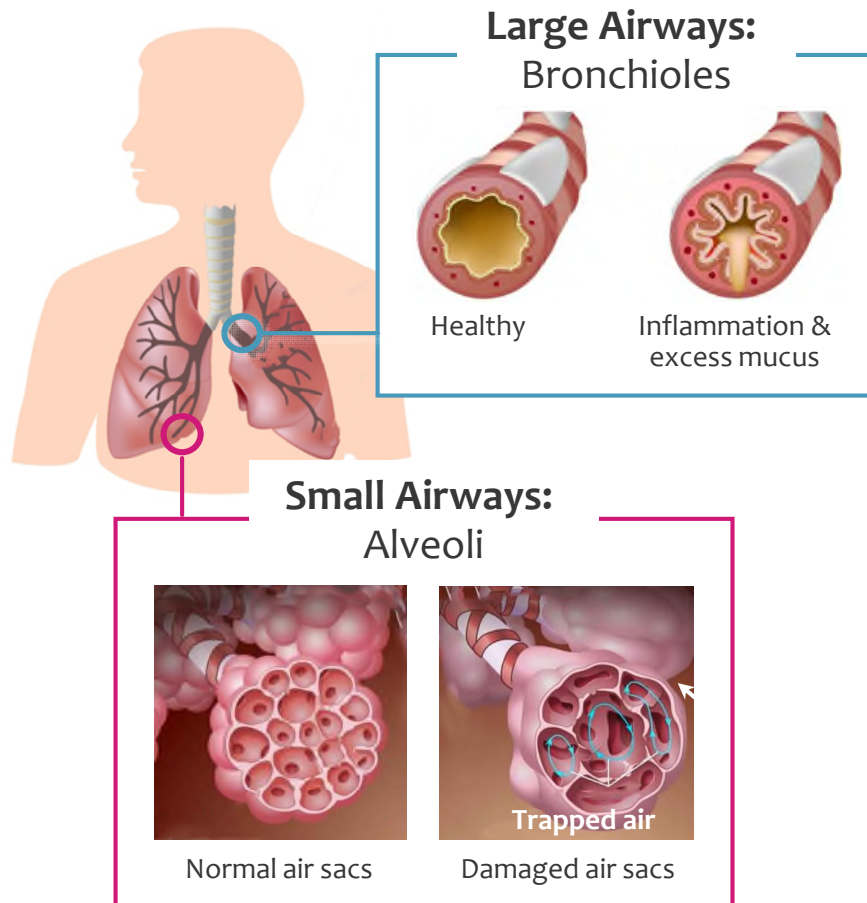
Sources: COPD Foundation. Sullivan J, et al. *Chronic Obstr Pulm Dis.* 2018; 5(4): 324-333.

3rd leading medical cause of death
by disease in US





COPD: A significant unmet need



Consequences and symptoms

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

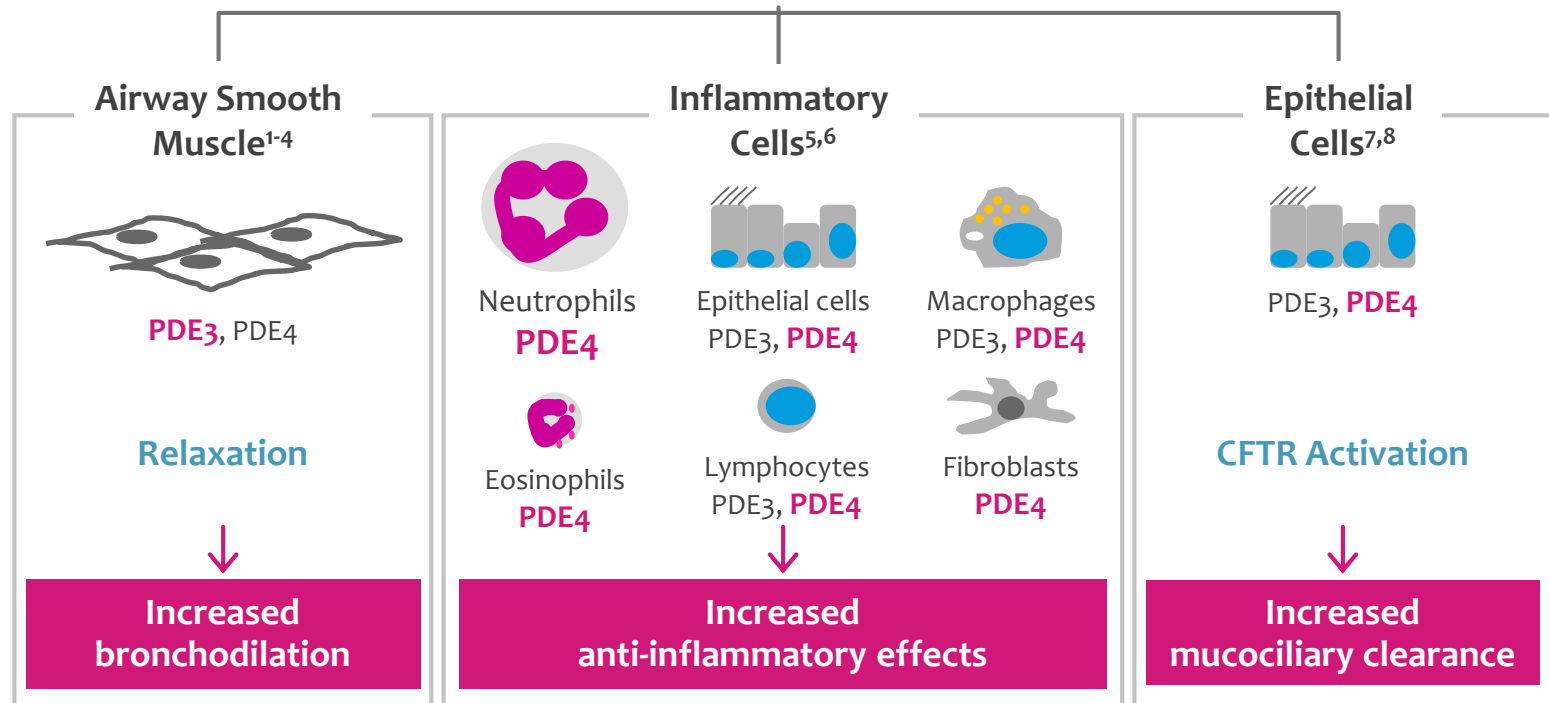
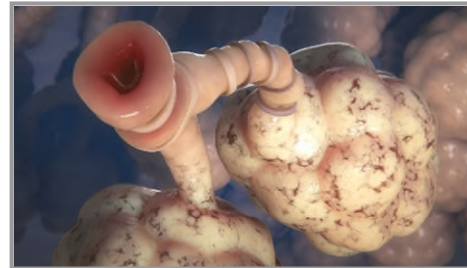
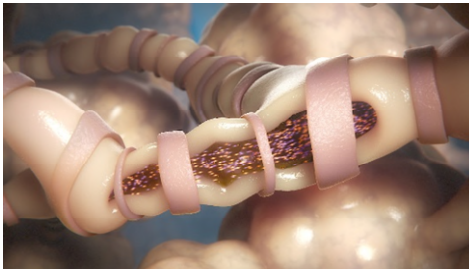
Ensifentrine first-in-class candidate: Bronchodilator and anti-inflammatory in a single compound



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Ensifentrine (RPL554)
Dual PDE₃ and PDE₄ enzyme inhibitor

Impacts 3 Key Mechanisms in Respiratory Disease:



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



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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

4 Week Phase 2b: Rapidly improved lung function and progressive symptom relief as single treatment

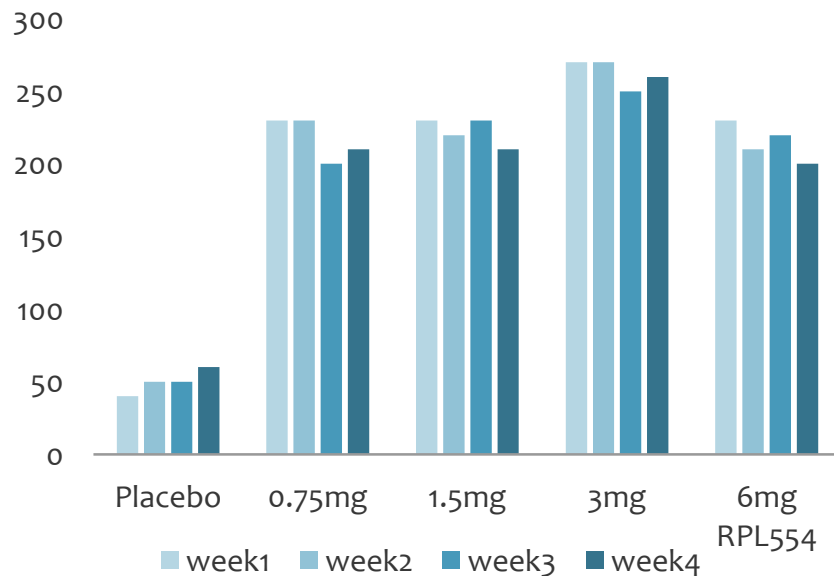


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Lung function

Peak Change FEV₁ (mL), p<0.001*

N=403

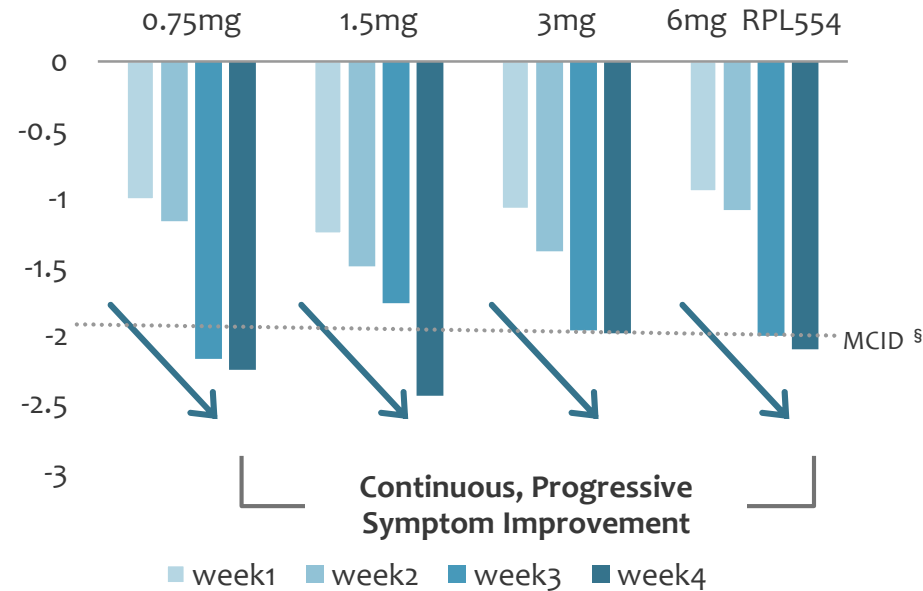


*Peak Change from Day 1 in Baseline in FEV₁ (mL) on Day 28, Week 4, Primary endpoint was met

Symptom relief

Total Score E-RS: COPD by Week, p<0.02**

N=403



** Placebo corrected

§ Minimal clinically important difference

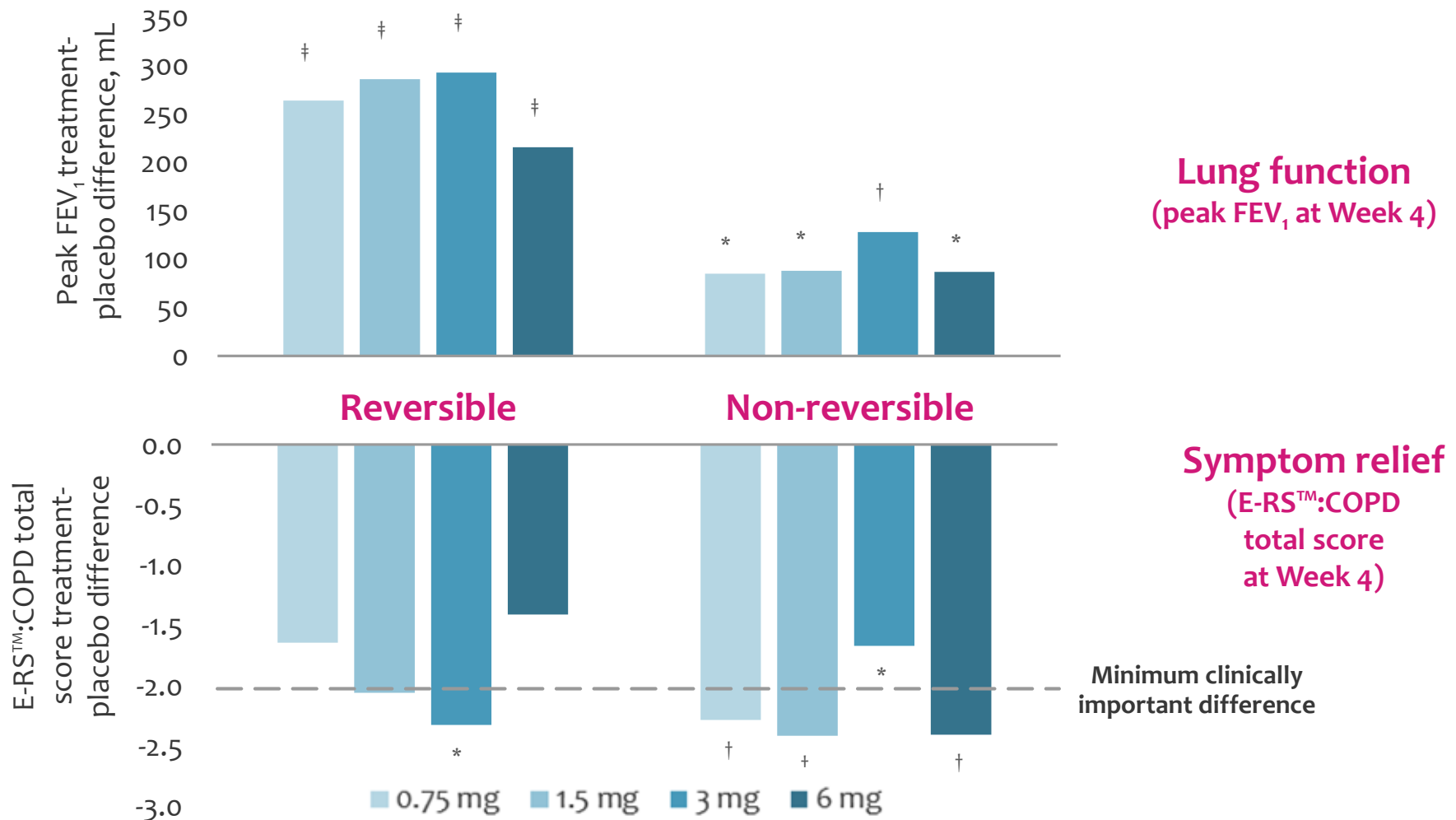
Bronchodilator + anti-inflammatory = Potential to reduce symptoms and exacerbations*

* Symptoms are a precursor to exacerbations; Müllerová H, et al. PLoS One 2014;9:e85540

Effective symptom improvement in both reversible and non-reversible patients with COPD

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Symptom improvement is unrelated to magnitude of bronchodilation



*p<0.05; †p<0.01; ‡p<0.001. Data are least squares mean ensifentrine–placebo differences. Reversible patients (N=133) had a pre- to post-salbutamol change in FEV₁ at screening of ≥200 mL and ≥12%; non-reversible patients (N=270) had a change of <200 mL or <12%.

Phase 2: Improvement in both FEV1 and residual volume when inhaled on top of two bronchodilators



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Lung function FEV1 (mL)[#]

N=79

600

500

400

300

200

0

Morning Peak FEV1 Day 3

Avg FEV1 0-4h Day 3

Evening Peak FEV1 Day 3

Morning dose

Evening dose

■ Stiolto + placebo

■ Stiolto + 1.5 mg ensifentrine

■ Stiolto + 6 mg ensifentrine

* p<0.05; # Change from Baseline on Day 3

Day 3 morning Peak FEV1, primary endpoint (not statistically significant)

Residual Volume (mL)

N=79

0

-100

-200

-300

-400

-500

-600

-700

1.25h

Evening dose

12.25h

259mL

138mL

*

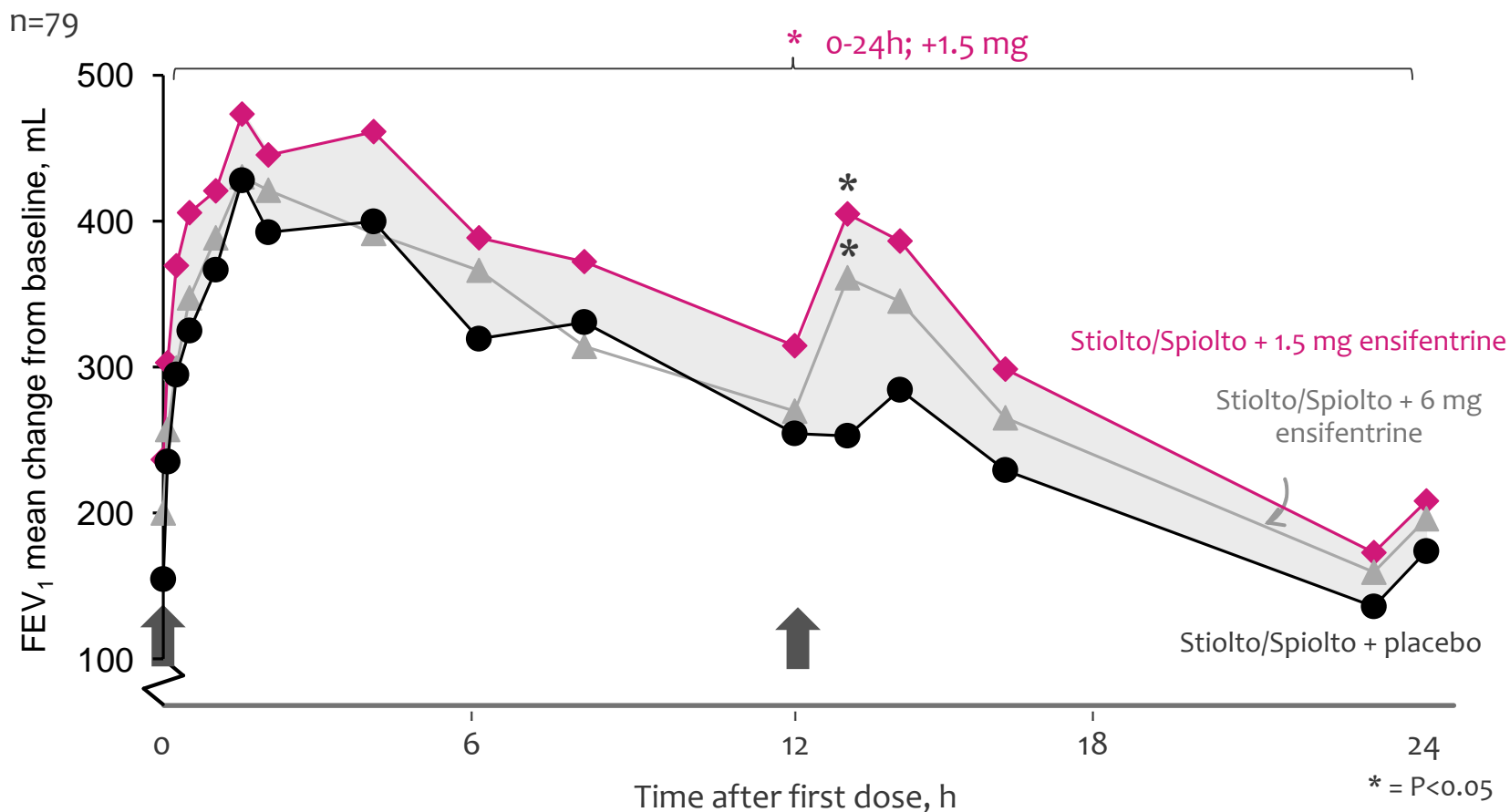
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*

28% of patients used triple therapy (LAMA, LABA, ICS)

Potential to improve FEV1 and symptoms in patients with no further maintenance treatment options

Phase 2, Day 3: Significant additional lung function improvement over 24 hours on top of dual/triple COPD therapy



Significant ~50 to 130 mL additional improvement in FEV₁ through 24 hours with 1.5 mg

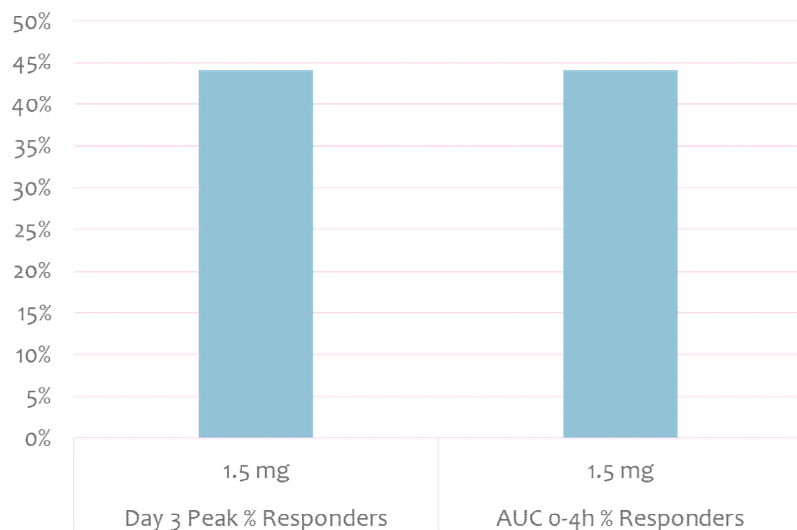
Learnings from 3 day study informs Ph3 positioning study in COPD

Results from on-going post hoc analysis

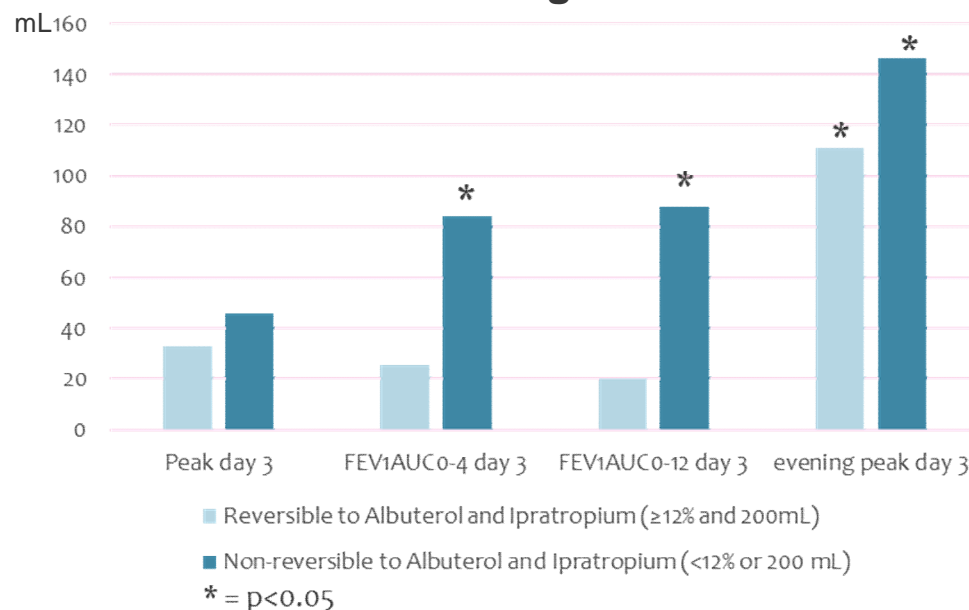


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>40% of patients had ≥ 100 mL increase in FEV1 vs placebo



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



Enrich Ph3 study as add-on to dual/triple therapy for symptomatic patients that are also poorly reversible to standard bronchodilators, explore most effective endpoints and drop top dose

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
 - Twice-a-day dosing for 28 days of nebulized ensifentrine at four dosage levels (0.375 mg, 0.75 mg, 1.5 mg and 3.0 mg) versus placebo
 - **Facilitate dose selection for Phase 3**
- **Population:** Up to 400 patients with 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 (Spiriva 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

-
FEV1 and symptom improvement,
explore exacerbations in pooled
data

B. Positioning study:
Inform physicians and payors

Add-on treatment to
dual bronchodilators

Monotherapy
(Dose Ranging)
400 pts

Bronchodilator + anti-inflammatory
Completed 2018

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

Bronchodilator
Completed 2017

Add-on to
Single Therapy
(Dose Ranging)*

Bronchodilator +
anti-inflammatory*

Add-on to
Double/Triple
Therapy

Bronchodilator
Plan to complete Jan 2019

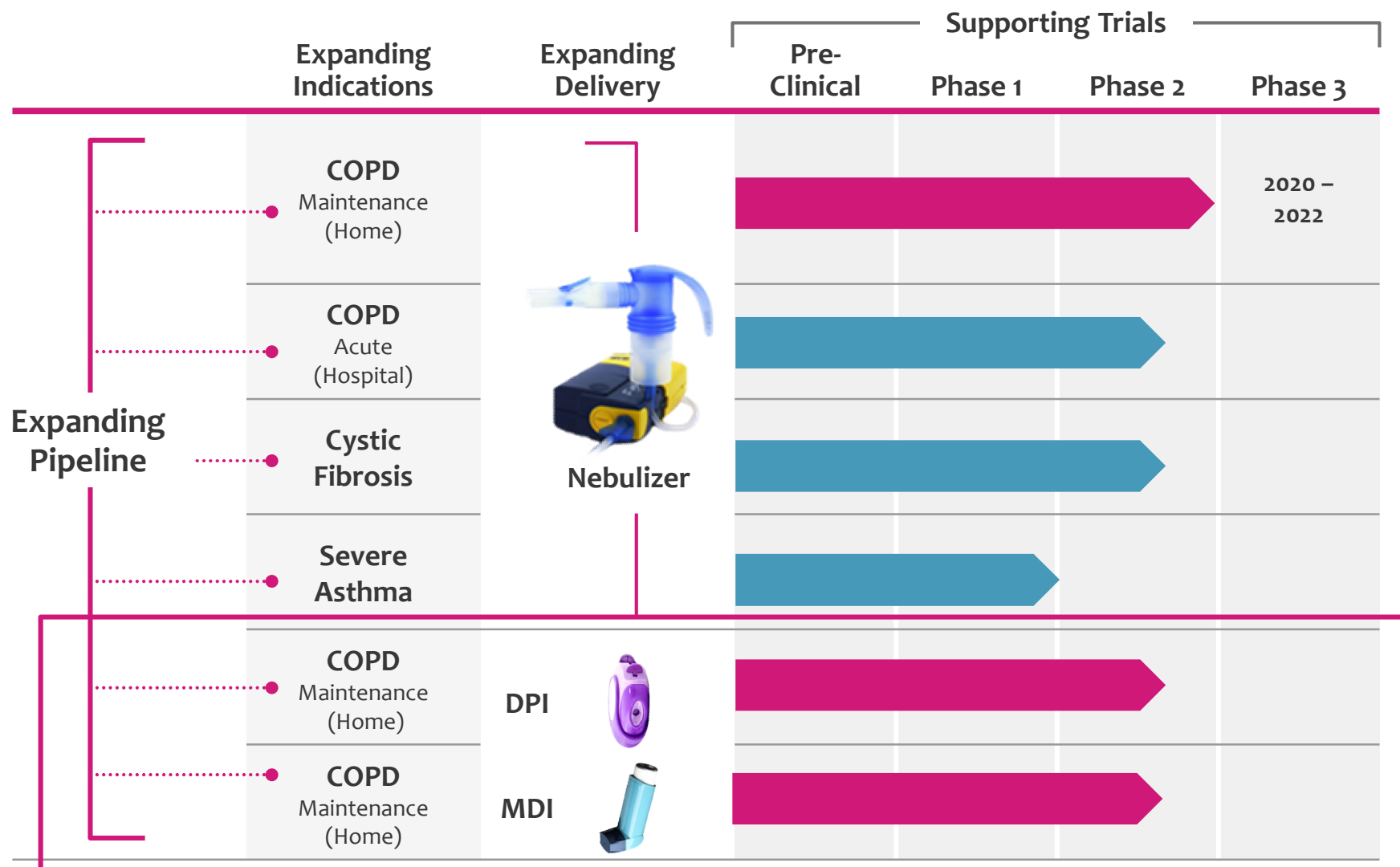
End of Phase 2 Meeting
with FDA, target H1 2020

* Results expected in 4Q 2019/1Q2020

Ensifentrine lifecycle: Expanding the pipeline over time



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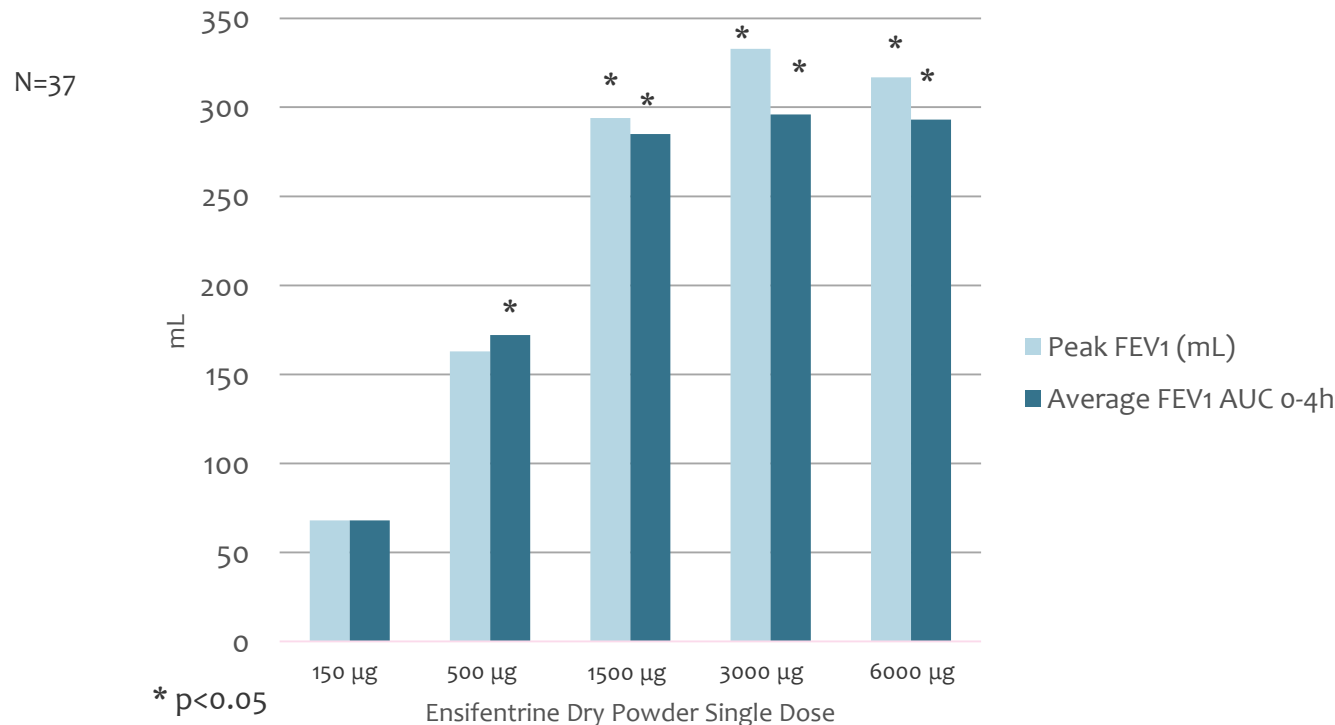
Dry Powder formulation: Positive Phase 2 data in first part of COPD trial



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Single dose data; multiple dose data to follow in 3Q19

Dose-dependent, significant and clinically meaningful bronchodilator response



Inhaler usage for maintenance therapy (estimate: >5 million COPD patients in US)

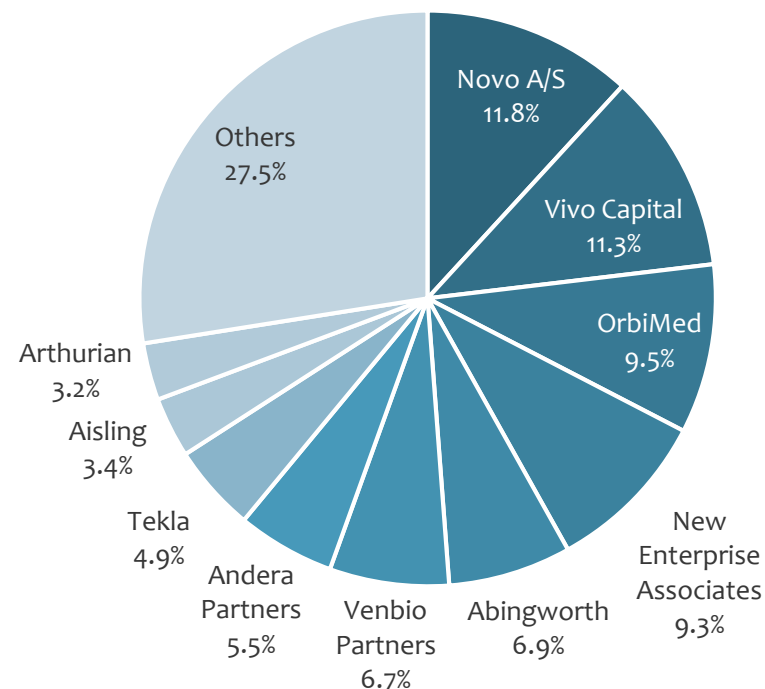
**DPI/ MDI partnering opportunity
could dramatically expand commercial potential**

Backed by major healthcare investors

Financial overview March 31, 2019

Cash and cash equivalents	\$70.4M ¹
Operating expenses 1Q19	\$10.1M ¹
Market cap	\$82.3M ²

Shareholdings³



¹Exchange rate used (US dollars per pound sterling): March, 29, 2019: \$1.3032
Cash and cash equivalents comprises cash + cash deposits > 3 months maturity
Cash and equivalents at March 31, 2019 amounted to £54.0M (\$70.4M)

²Current issued 105.3M shares or 13.2m ADSs, share price \$6.25 on May 2, 2019

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

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

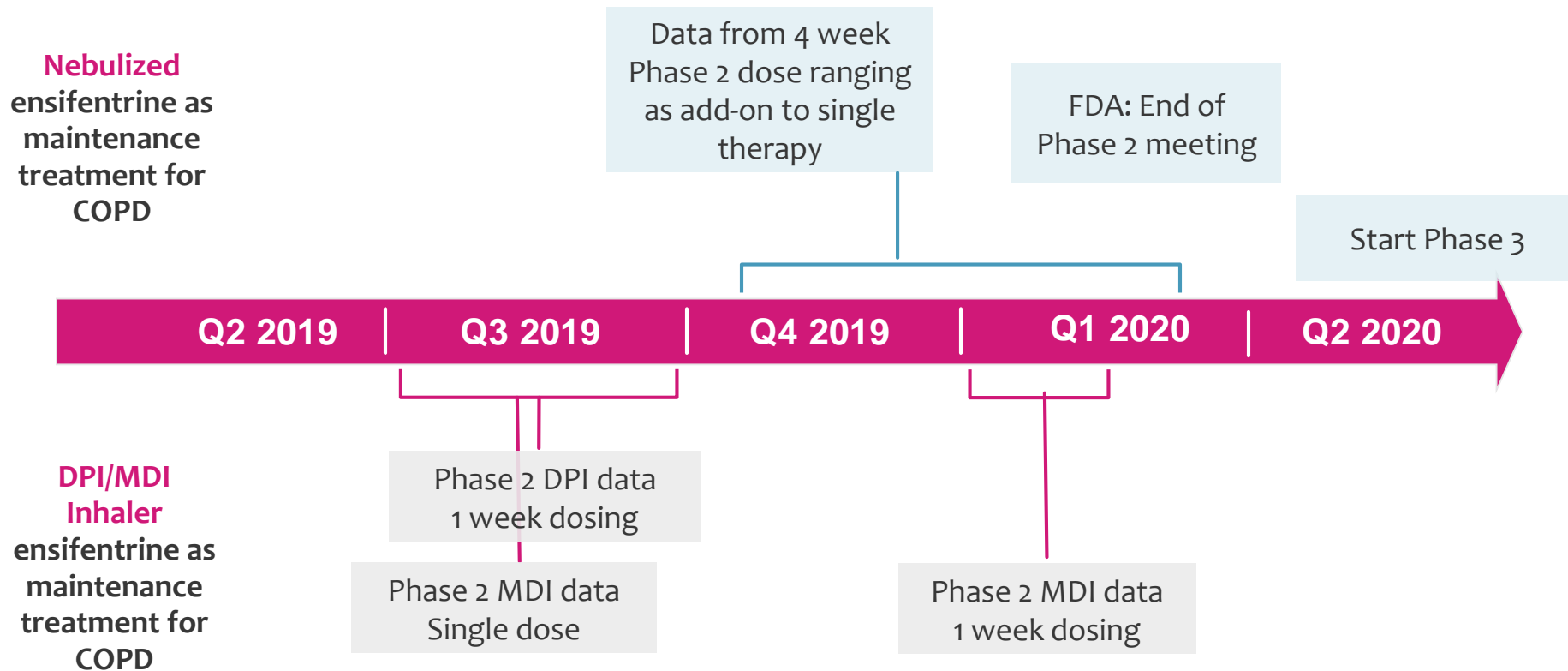
- Anti-inflammatory mechanism reduces cough and improves mucociliary clearance

First NDA filing in US with nebulizer formulation planned for 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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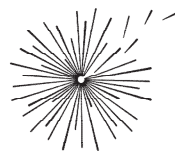
Simple Phase 3 trial design, similar to Phase 2b studies, to increase likelihood of regulatory success

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

