Bellus HEALTH

Corporate Presentation

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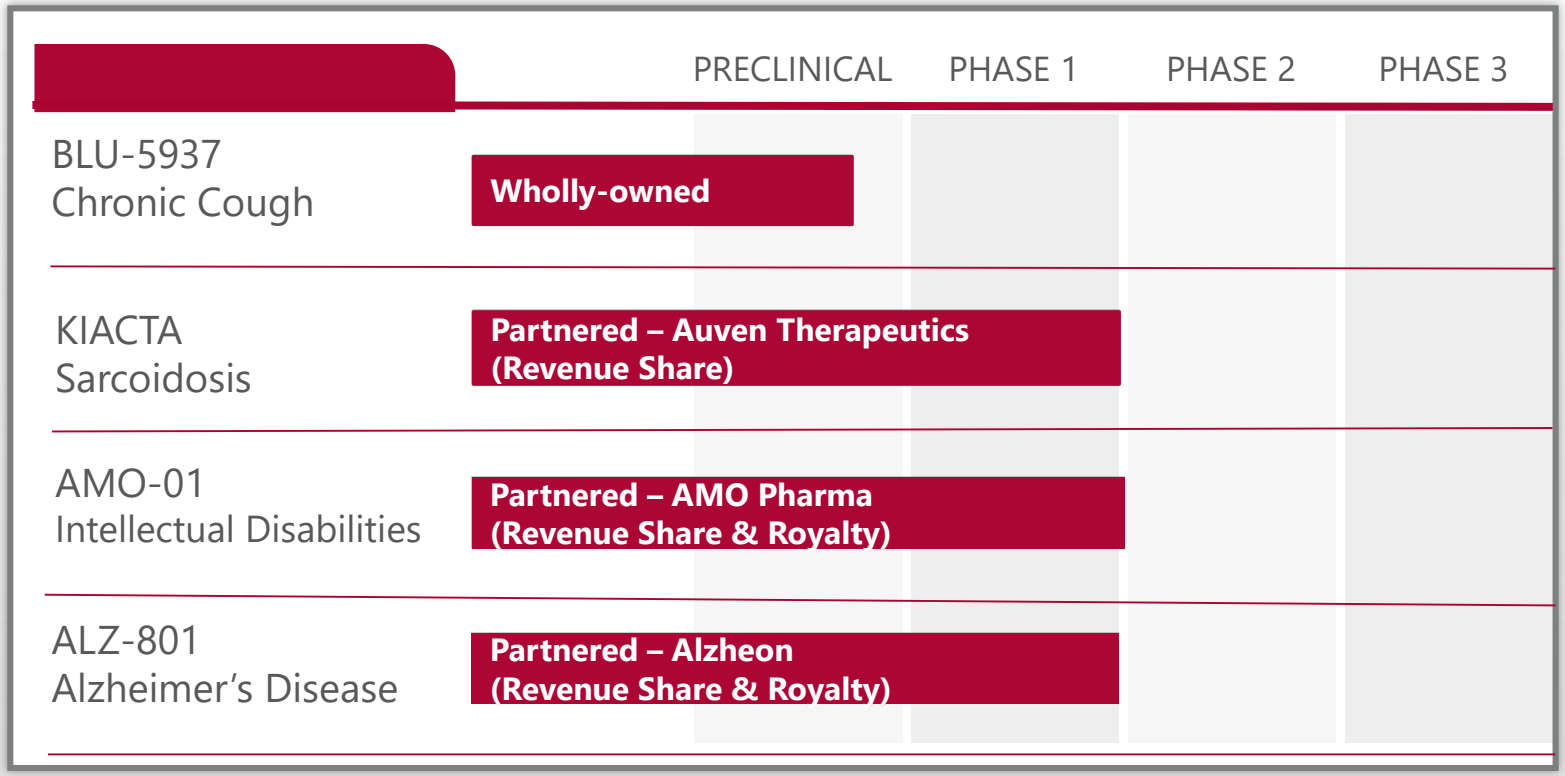
BELLUS Overview

- Public company listed on Toronto Stock Exchange (BLU.TO)
- Developing BLU-5937: potentially best-in-class drug for multi billion dollar market
  - Chronic cough affects ~10% of adults in U.S., large unmet need
  - Clinically validated target, clear and efficient development path
  - Entering Phase 1 Q3 2018
- Balanced portfolio: partner in three mid-stage programs
- Financed for 2+ years through multiple clinical milestones
- Management with track record of execution

Core capability: generating value by advancing drug candidates through clinical studies

Pipeline



Strong core project, balanced pipeline, multiple prospects

BLU-5937: Best-in-Class Potential

P2X3: Validated target for chronic cough	Merck acquired a P2X3 antagonist program for US$500M based on positive Phase 2 data Problematic side effect profile with 80% patients experiencing change in taste perception (alteration or loss)
BLU-5937: Potentially best-in-class P2X3 antagonist	High P2X3 selectivity driver for potential differentiated product profile with improved efficacy and reduced/no effect on taste perception Clear, efficient path to demonstrate superiority
BLU-5937 History	Developed at Astra Zeneca and then NEOMED Institute Global rights licensed by BELLUS in February 2017

Low risk and superior profile targeting potential multi billion dollar drug class

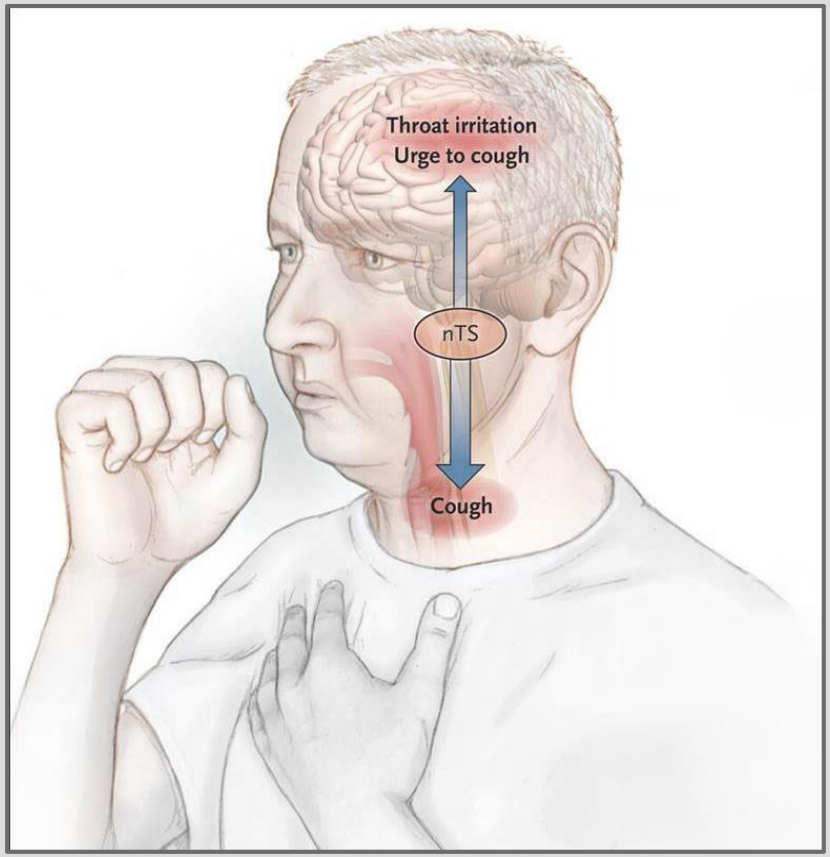
Chronic Cough

Characteristics

Cough lasting ≥ 8 weeks, associated with:

- Pulmonary diseases (asthma, COPD, IPF)
- Extra-pulmonary disorders (allergic rhinitis, gastro-oesophageal reflux)
- Side effect of certain drugs
- No identifiable cause

Cough frequency can be high (10-100s times per hour) with lengthy duration (months or years)



"I see patients that have been coughing 2 months to 30 years. Within that group, there is a good portion where I am the 8th or 10th doctor."
– Chronic Cough KOL

Impact on Society

Patients

Physical, social, psychosocial complications

- Sleep deprivation
- Chest pain
- Urinary incontinence
- Interference with lifestyle, work & leisure
- Anxiety / Depression

Healthcare System

Time and resource intensive for the healthcare system

- Chronic cough affects ~10% of the adult population
- 38% of pulmonologist practice
- Resource intensive diagnosis
- Complex patient pathway with many physicians involved (PCP, Allergist, ENT, Pulmonologist, Cough Clinic)

"There are some patients who really can't function and have urinary incontinence issues or can't sleep in the same bed as their spouses"
-Allergist

Limited and Inadequate Treatment Options for Chronic Refractory/Unexplained Cough

Treatments	Inadequate Results
• Opioids	• Limited efficacy and/or duration of effect
• Benzonatate	• Addiction potential
• Gabapentin / Pregabalin	• Significant side effects
• Speech therapy	• Inability to use on a chronic basis
• Dextromethorphan (cough syrup)	

"There is truly a need for a safe and effective non-narcotic, non-sedating cough suppressant for those that have gone through a thorough workup and treatment for reversible causes" -Pulmonologist

P2X3 Receptor: Rational Target for Chronic Cough

Coughing trigger
(ex. asthma attack)

↓

Cellular damage activates
P2X3 receptors in airway

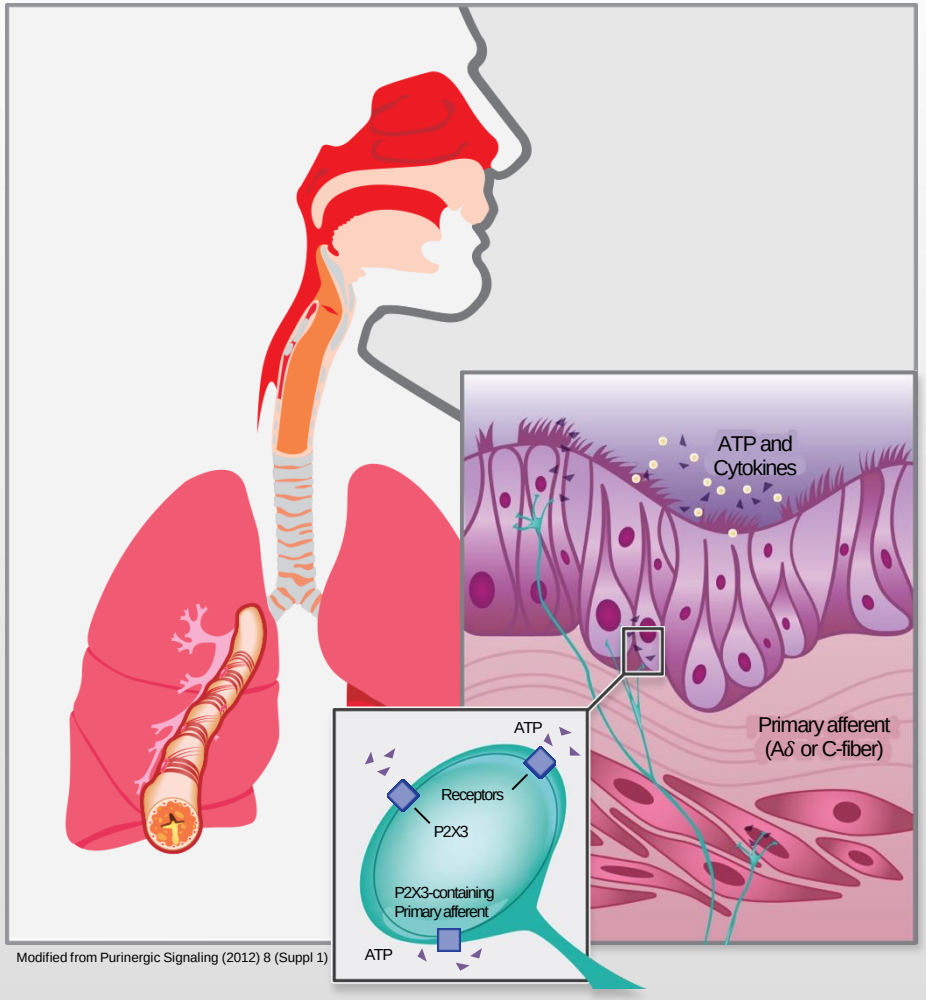
↓

Airway hyper-excitability

↓

Chronic cough

Inflammation/
Cell injury

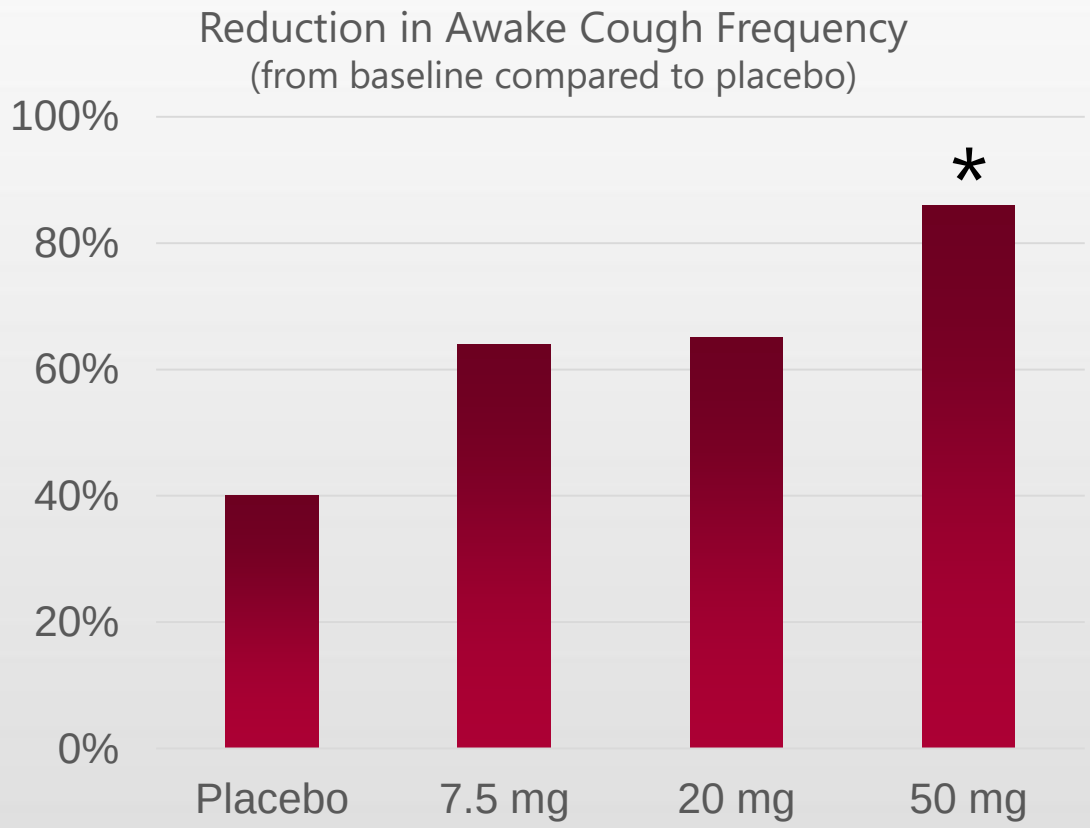


Modified from Purinergic Signaling (2012) 8 (Suppl 1)

P2X3 is a sensory receptor found in peripheral nervous system with central role in triggering cough reflex

P2X3 Receptor: Clinically Validated Target

Merck's MK-7264 / AF-219 - P2X3 benchmark compound



*37% vs. placebo ($p<0.05$)
NB: Doses are BID

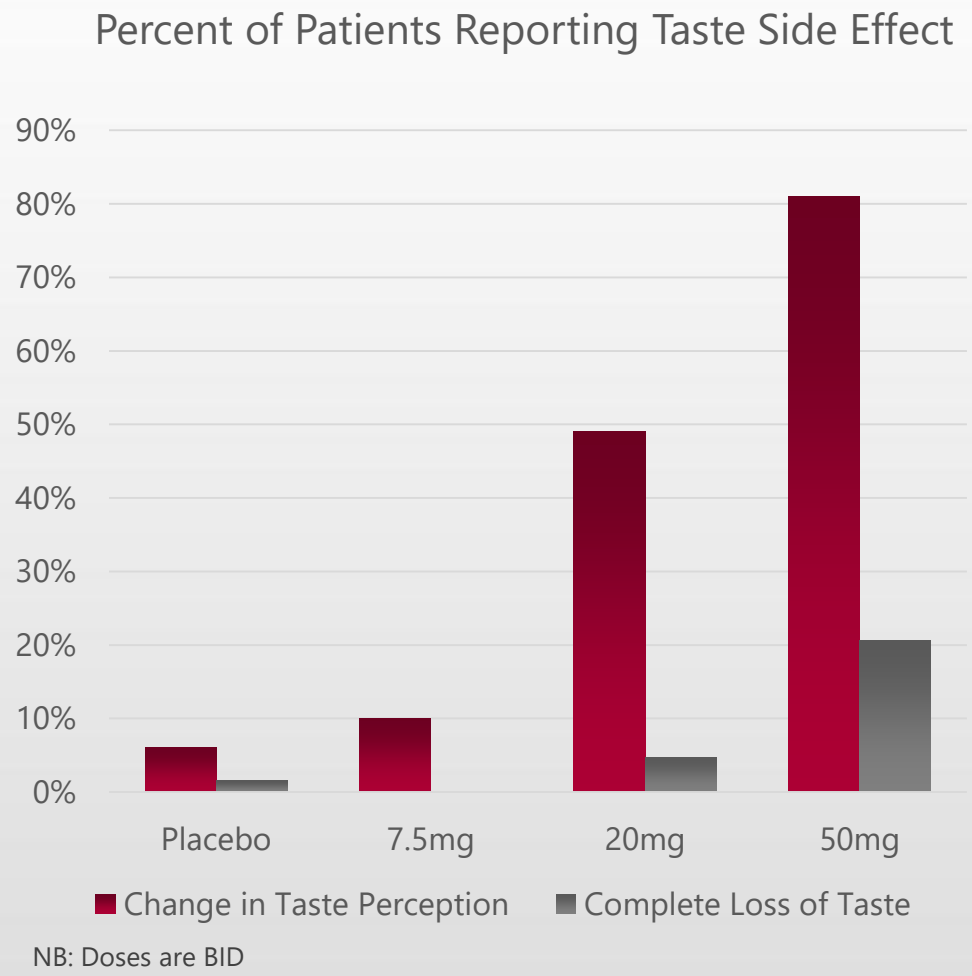
Phase IIb (253 patients; 12 week study) meets primary endpoint by reducing awake cough frequency by

86%*

Merck & Co., Inc. (2017). *Merck Announces Presentation of Phase 2 Results for MK-7264, an Investigational, P2X3 Receptor Antagonist, Being Evaluated for the Treatment of Chronic Cough.* [Press Release]. Retrieved from http://www.mrknewsroom.com/news-release/research-and-development-news/merck-announces-presentation-phase-2-results-mk-7264-inve

Targeting P2X3 is a clinically validated strategy for treating chronic cough

MK-7264: Significant Adverse Taste Effect



NB: Doses are BID

At therapeutic dose (50 mg BID):

~80%
of patients reported change in taste perception

~40%
of patients reported very/extremely bothersome change in taste perception

Merck & Co., Inc. (2017). *Merck Announces Presentation of Phase 2 Results for MK-7264, an Investigational, P2X3 Receptor Antagonist, Being Evaluated for the Treatment of Chronic Cough.* [Press Release]. Retrieved from http://www.mrknewsroom.com/news-release/research-and-development-news/merck-announces-presentation-phase-2-results-mk-7264-inve

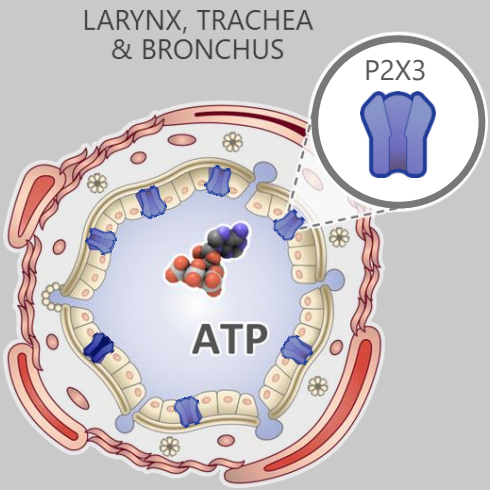
Effect on taste perception likely due to low selectivity for P2X3

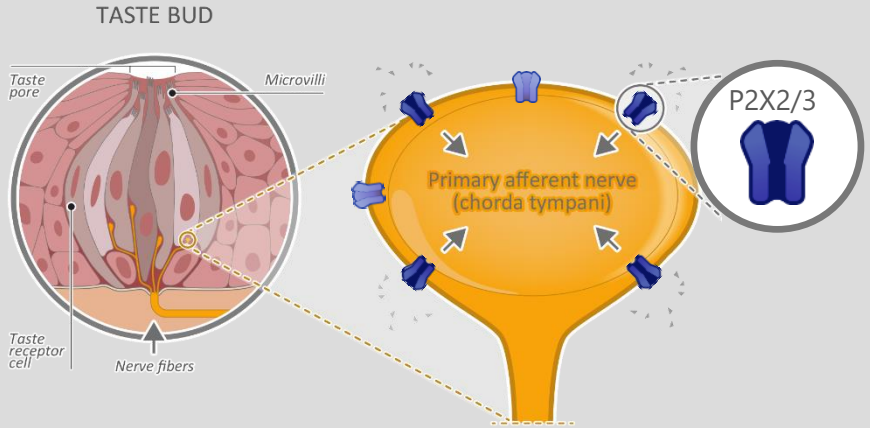
P2X3 and P2X2/3 Roles in Cough and Taste

ATP-gated ion channels that transmit sensory signals, function in two predominant trimer structures:

P2X3 homotrimers have primary role in **cough reflex**

P2X2/3 heterotrimers have major role in **taste**





Opportunity for highly selective P2X3 antagonist that inhibits P2X3 to reduce cough and does not inhibit P2X2/3 to maintain taste

BLU-5937: Best-in-Class Profile

Twice Daily
Oral Dosing
Expected

High
Selectivity and
Potency for P2X3

No
safety findings of
concern

Broad and
comprehensive IP to
2034

Targeting
~2.6M
US Patients

Strong drug candidate profile with potential to be best in P2X3 class

Key Differentiating Factor: P2X3 vs P2X2/3 Selectivity

BLU-5937 is

10x more potent

>1000x more selective (vs P2X2/3)

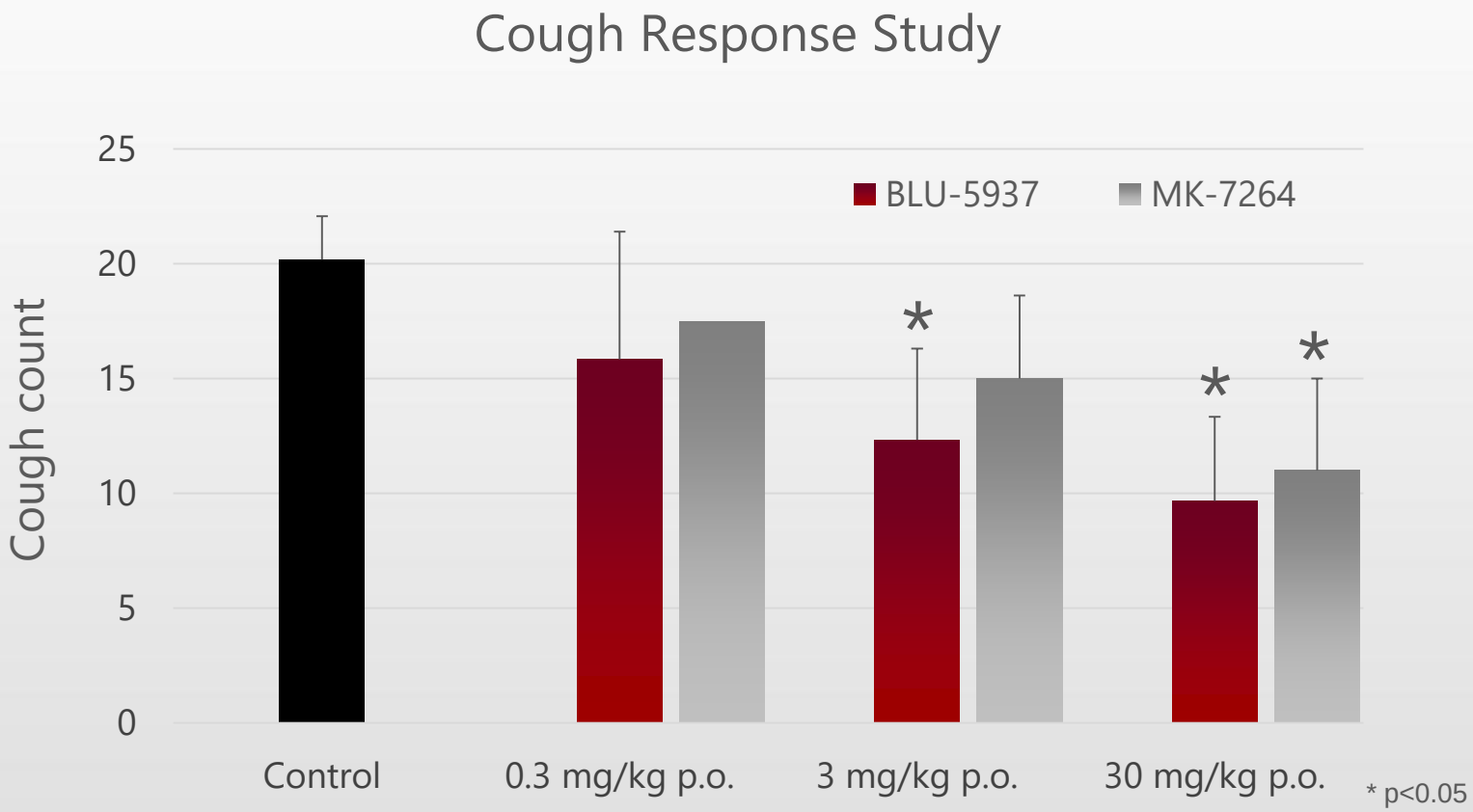
than MK-7264 for the human P2X3 receptor

	BLU-5937	MK-7264
hP2X3 (IC_{50})	Low nM	Mid nM
hP2X2/3 (IC_{50})	Mid µM	High nM

Fluorescent calcium flux assay, using Fluo-8 kit and 3 µM α,β Me AT, performed in HEK293 cells stably expressing P2X3 and P2X2/3; 12 concentrations of each compound tested.

BLU-5937: right characteristics to potentially inhibit cough with little/no effect on taste perception

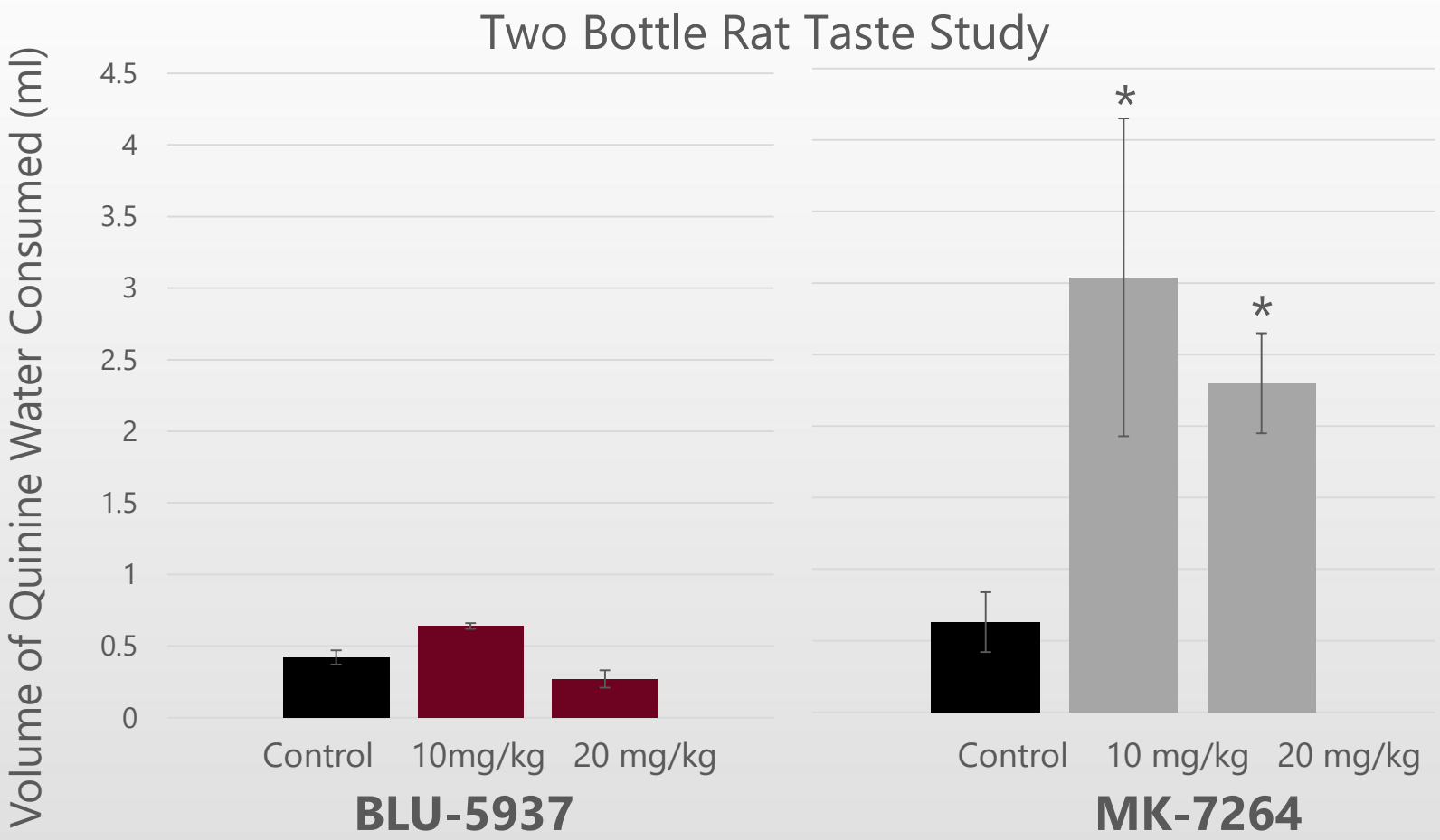
Cough Inhibition in Guinea Pig Model



Treatments (control, BLU-5937, MK-7264) were administered orally (p.o.) 2 hours prior to tussive agent exposure: citric acid (0.1 M, aerosol) and histamine (0.6 mM, aerosol); n=6 animals per group

BLU-5937 inhibits cough dose dependently and comparably to MK-7264

Taste Effect in Rat Taste Model

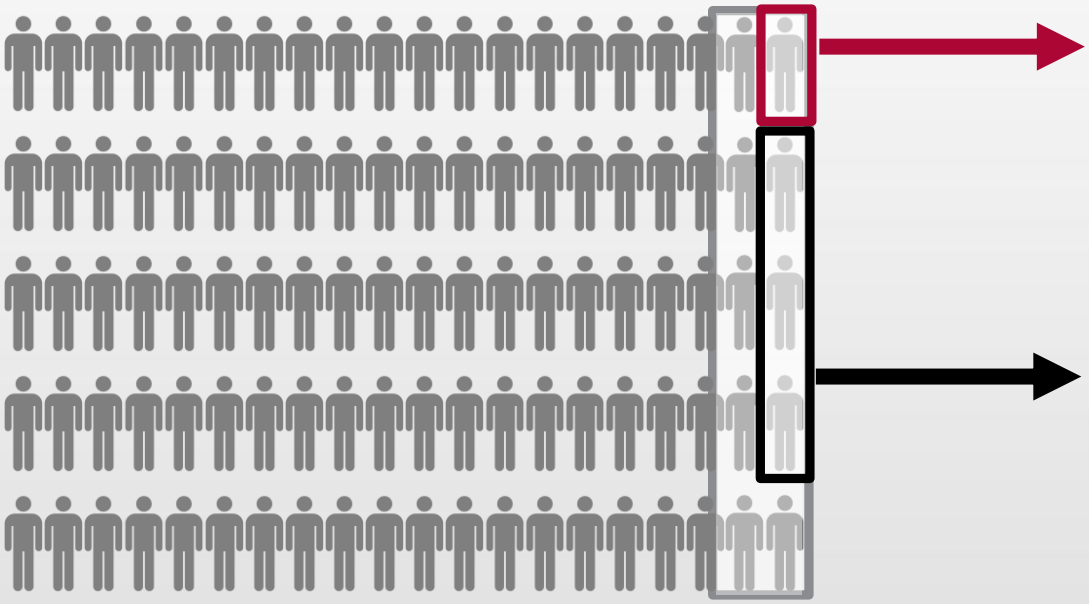


Treatments (control, BLU-5937, MK-7264) were administered ip: animals were water-fasted overnight and presented with one bottle of water and one bottle of water plus quinine (0.3mM) at T_{max} ; volume of liquid consumed measured for 15 minutes; n=10 animals per group; * $p < 0.05$ vs control

MK-7264 changes taste perception; BLU-5937 does not

Addressable Patient Population

263M U.S. adults



2.6M

Primary addressable patients (idiopathic, treatment refractory > 1 yr)

9.1M

Secondary addressable patients (treatment refractory > 8 weeks < 1 yr)

=10% or

26.3M

chronic cough patients

Torreya Insights report 2017

Comparables Analysis and Pricing

BLU-5937 Price Analogs

	Indication	Addressable US Patient Population	Market Dynamics	2016 WACC/mo
Linzess (linaclotide) capsules	Chronic idiopathic constipation	35M	Genericized	$319
amitiza lubiprostone	IBS with constipation	4M	Genericized	$330
ADVAIR DISKUS	Adult asthma and Adult COPD	18.4M 12M	Highly competitive, several generics	$289
Aptiom (eslicarbazepine acetate) tablets	Partial onset seizures	1M	Highly competitive	$570

Torreya Insights Report 2017

Payers discussions and product analogs support pricing of $300-600 per month

Key Development Milestones

Q2 2018	Q3 2018	2019
File Clinical Trial Application	Start Phase 1	Start Phase 2
Safety margins Starting dose for Phase 1	Effect on taste Safety/tolerability Dose selection for Phase 2	Effect on cough and taste Dose selection for Phase 3

Value creating milestones throughout development path

Governance

Board of Directors			
Dr. Francesco Bellini (Chair)	Franklin Berger	Pierre Larochelle	
Dr. Youssef Bennani	Joseph Rus	Dr. Clarissa Desjardins	Roberto Bellini

Management
Roberto Bellini, President and Chief Executive Officer
Dr. Denis Garceau, Senior Vice President, Drug Development
François Desjardins, Vice President, Finance
Tony Matzouranis, Vice President, Business Development

Stock and Financial Information

Stock Information	
Shares (basic)	119.5M
Shares (fully diluted)	132.7M
Market Capitalization	~$50M
Key Financials[1]	
Cash	$23.9M
Ownership	
Insiders	~30%
Institutional	~35%

[1]as at December 31, 2017

$20M

financing completed on December 12th with significant institutional healthcare investor participation

Current cash runway provides 2+ years of capital through multiple milestones

Multiple Upcoming Milestones to Drive Value

Management Past Execution

- ✓ Attracted >$100M to funding projects
- ✓ Executed multiple global clinical studies including Phase 3
- ✓ Completed multiple transactions (in-licensing, partnering, out-licensing)

Milestones

- 28 Day Toxicity Studies (Q2 2018)
- File regulatory dossier for BLU-5937 Phase 1 (Q2 2018)
- Start BLU-5937 Phase 1 study (Q3 2018)
- Topline Phase 1 data including taste (Q4 2018)
- Progress on other pipeline projects

Important operational milestones and value inflection points in 2018

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