



Bellus
HEALTH

Investor Presentation

NASDAQ/TSX - BLU

March 21st, 2023

Forward Looking Statements

Certain statements contained in this presentation, other than statements of fact that are independently verifiable at the date hereof, may constitute "forward-looking statements" within the meaning of Canadian securities legislation and regulations, the U.S. Private Securities Litigation Reform Act of 1995, as amended, and other applicable securities laws. Forward-looking statements are frequently, but not always, identified by words such as "expects," "anticipates," "believes," "intends," "estimates," "potential," "possible," "projects," "plans," and similar expressions. Such statements, based as they are on the current expectations of management, inherently involve numerous important risks, uncertainties and assumptions, known and unknown, many of which are beyond BELLUS Health Inc.'s ("BELLUS Health") control. Such statements include, but are not limited to, the potential of camlipixant (BLU-5937) to successfully treat refractory chronic cough ("RCC") and other hypersensitization-related disorders and benefit such patients, BELLUS Health's expectations related to its preclinical studies and clinical trials, including the timing of initiation of and the design of the Phase 3 clinical trials of camlipixant in RCC, the timing and outcome of interactions with regulatory agencies, the potential activity and tolerability profile, selectivity, potency and other characteristics of camlipixant, including as compared to other competitor candidates, especially where head-to-head studies have not been conducted and cross-trial comparisons may not be directly comparable due to differences in study protocols, conditions and patient populations, the commercial potential of camlipixant, including with respect to patient population, pricing and labeling, BELLUS Health's financial position and sufficiency of cash resources to bring BELLUS Health through topline results of CALM-1 and CALM-2 clinical trials, and the potential applicability of camlipixant and BELLUS Health's P2X3 platform to treat other disorders. Risk factors that may affect BELLUS Health's future results include but are not limited to: the benefits and impact on label of its enrichment strategy, estimates and projections regarding the size and opportunity of the addressable RCC market for camlipixant, the ability to expand and develop its project pipeline, the ability to obtain adequate financing, the ability of BELLUS Health to maintain its rights to intellectual property and obtain adequate protection of future products through such intellectual property, the impact of general economic conditions, general conditions in the pharmaceutical industry, the impact of the ongoing COVID-19 pandemic on BELLUS Health's operations, plans and prospects, including to the initiation and completion of clinical trials in a timely manner or at all, changes in the regulatory environment in the jurisdictions in which BELLUS Health does business, supply chain impacts, stock market volatility, fluctuations in costs, changes to the competitive environment due to consolidation, achievement of forecasted burn rate, achievement of forecasted preclinical study and clinical trial milestones, reliance on third parties to conduct preclinical studies and clinical trials for camlipixant and that actual results may differ from topline results once the final and quality-controlled verification of data and analyses has been completed. In addition, the length of BELLUS Health's product candidate's development process and its market size and commercial value are dependent upon a number of factors. Moreover, BELLUS Health's growth and future prospects are mainly dependent on the successful development, patient tolerability, regulatory approval, commercialization and market acceptance of its product candidate camlipixant and other products. Consequently, actual future results and events may differ materially from the anticipated results and events expressed in the forward-looking statements. BELLUS Health believes that expectations represented by forward-looking statements are reasonable, yet there can be no assurance that such expectations will prove to be correct. The reader should not place undue reliance, if any, on any forward-looking statements included in this presentation. These forward-looking statements speak only as of the date made, and BELLUS Health is under no obligation and disavows any intention to update publicly or revise such statements as a result of any new information, future event, circumstances or otherwise, unless required by applicable legislation or regulation. **Please see BELLUS Health's public filings with the Canadian securities regulatory authorities, including, but not limited to, its Annual Information Form, and the United States Securities and Exchange Commission, including, but not limited to, its Annual Report on Form 40-F, for further risk factors that might affect BELLUS Health and its business.**



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Company Overview

BELLUS Health – Working to Better the Lives of Patients Suffering from Persistent Cough

Drug in Development: Camlipixant (BLU-5937)

- Oral P2X3 antagonist with potential best-in-class profile

Lead Indication - Refractory Chronic Cough (RCC)

- Persistent cough >8 weeks that does not respond to treatment for underlying condition or is unexplained
- Compelling results from the SOOTHE Phase 2b trial (Dec 2021)
- First patients randomized in the Phase 3 CALM program (CALM-1 and CALM-2 trials) in 4Q 2022
- Population estimated at ~9M in the U.S., a large and growing market with limited competition

Pipeline in a Product

- Potential to study camlipixant in other cough indications

Key Upcoming Events

- Topline results from CALM-1 and CALM-2 expected in 2H 2024 and 2025, respectively
- Topline results from Phase 1 QD formulation expected in 2Q 2023
- Analyst Day planned for 2H 2023

Intellectual Property

- Patents granted to 2034 (composition of matter) and 2038 (method of use)
- 100% ownership of global rights

Financials

- US\$337.1M cash position*
- Cash runway extends to 2H 2025



Strong Leadership and Advisory Group

Management



Roberto Bellini
President & Chief Executive Officer



Dr. Catherine Bonuccelli, MD
Chief Medical Officer



Ramzi Benamar, MBA
Chief Financial Officer



Dr. Denis Garceau, PhD
Chief Scientific Officer



Dr. Andreas Orfanos, MBBCh, MBA, FFPM
Chief Operations Officer



Tony Matzouranis
Senior Vice President, Business Development

Board of Directors



Dr. Francesco Bellini, PhD
Chair



Dr. Youssef Bennani, PhD



Dr. Clarissa Desjardins, PhD



Dr. Bill Mezzanotte, MD, PhD



Roberto Bellini



Franklin Berger



Pierre Larochelle



Joseph Rus

Clinical Advisory Board

CHRONIC COUGH

Dr. Jacky Smith (Chair), MB, ChB, FRCP, PhD
Manchester University

Dr. Michael S. Blaiss, MD
Medical College of Georgia

Dr. Surinder Birring, MB ChB (Hons), MD
King's College London

Dr. Peter Dicpinigaitis, MD
Albert Einstein Medical College

Refractory Chronic Cough

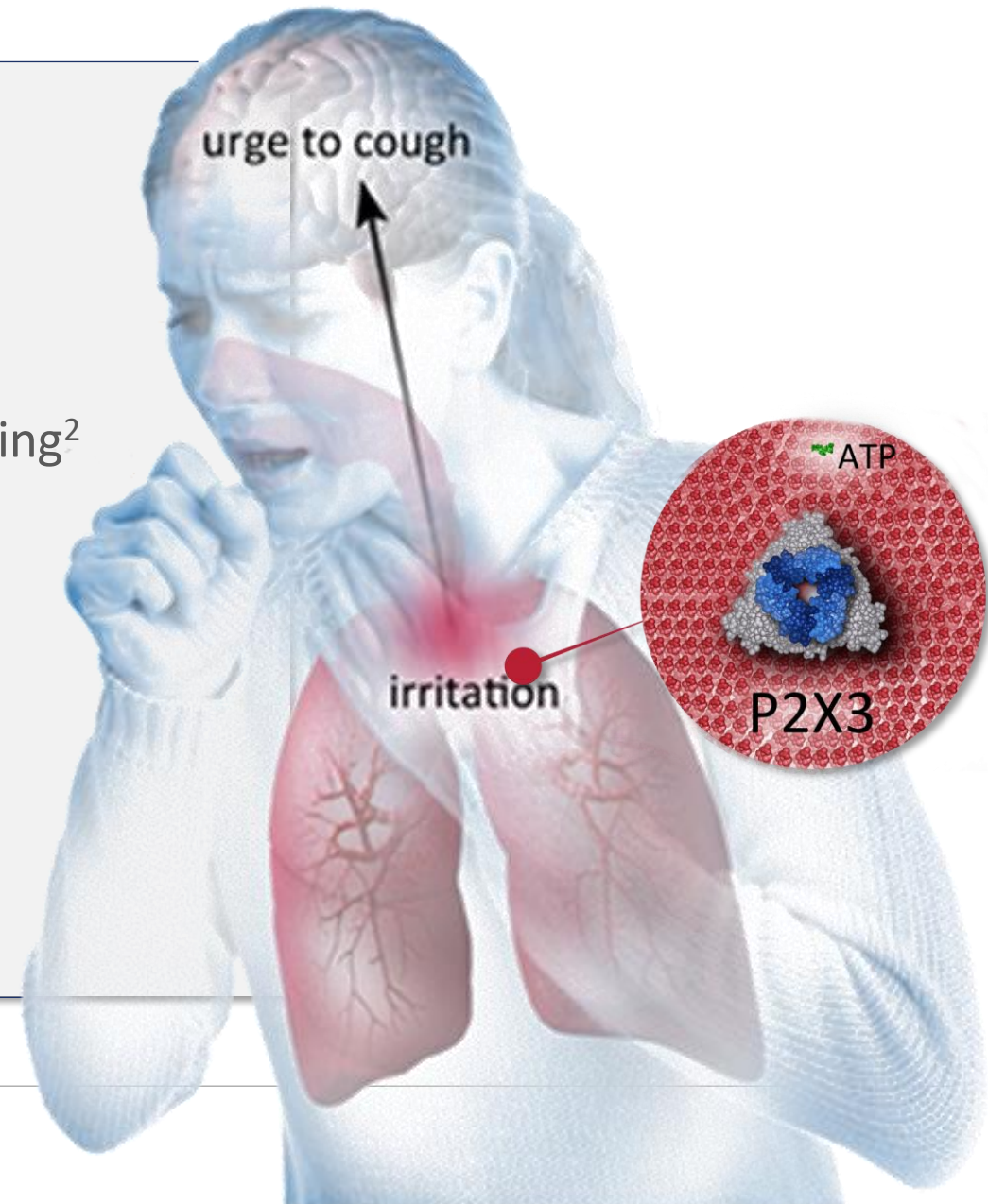
Cough lasting ≥ 8 weeks that does not respond to treatment for underlying cause or is unexplained¹

Significant impact on patients' quality of life, including impact on social, physical and psychosocial well-being²

No approved treatment, current options are inadequate and non-specific³

Large patient population⁴ - up to ~9M refractory chronic cough patients in the U.S., ~9M in Europe Top-5 and ~7M in China

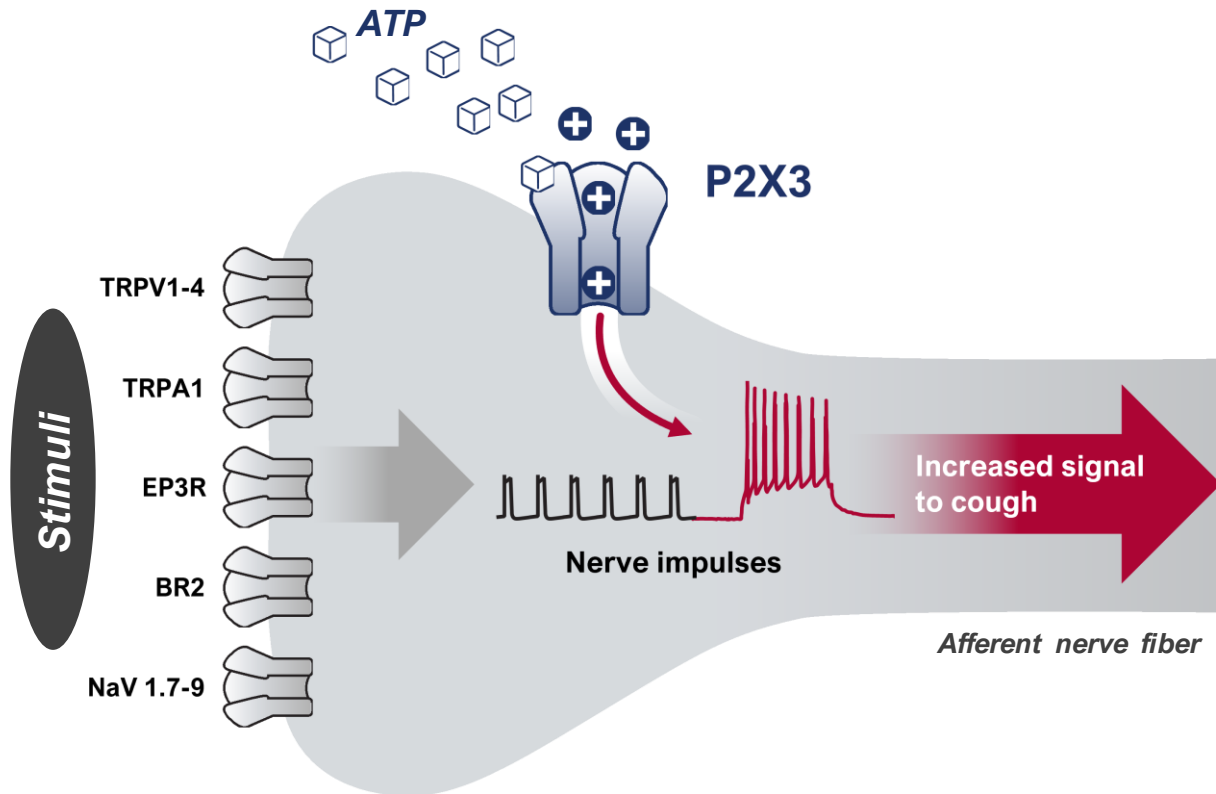
1. Irwin RS et al, (2018) CHEST 153 (1): 196-209. 2. Kuzniar et al. (2007) Mayo Clin. Proc. 82(1) 56-60. 3. Ryan NM, (2018) Expert Opin Pharmacother 19(7): 687-711. 4. Company sponsored market research.



P2X3 Receptor – Validated Target for Refractory Chronic Cough and Linked to Other Cough Indications

- Afferent neurons in peripheral nervous system express P2X3 receptor¹⁻⁶
- Activation of P2X3 triggers neuronal hypersensitization^{7,8} and can play an important role in urge to cough signalling pathway
- Clinically validated target for the treatment of refractory chronic cough
 - Targeting P2X3 could be an effective therapy in other cough indications where hypersensitivity plays a role

Role of P2X3 in cough hypersensitivity*





* TRP: Transient Receptor Potential channels EP3R: Prostaglandin EP3 Receptor BR2: Bradykinin Receptor 2 NaV: Voltage-gated sodium channel Adapted from: Al-Shamlan (2019) *Respir Res*. 6;20(1):110. Bonvini et al. (2017) *Pulm Pharmacol Ther*. 47:21-28. Fowles et al. (2017) *Eur Respir J*. 8;49(2):1601452. Garceau et al. (2019) *Pulm Pharmacol Ther*. 56:56-62. Kamei et al. (2005) *Eur J Pharmacol*. 28;528(1-3):158-61 Mazzone et al. (2016) *Physiol Rev*. 96(3):975-1024. Muroi et al. (2014) *Lung*. 192(1):15-20.

Camlipixant (BLU-5937) - Best-In-Class Potential



- **Highly potent oral P2X3 antagonist with best-in-class selectivity being developed to treat refractory chronic cough**
- **Compelling efficacy from SOOTHE Phase 2b trial completed in December 2021**
- **Well-tolerated with a low rate of class-related taste side effects**
- **Twice daily dosing with once-daily dosing in development**

Camlipixant (BLU-5937) - Pipeline

PROGRAM	DEVELOPMENT				STATUS	
Indication / Project	Preclinical	Phase 1	Phase 2	Phase 3	Worldwide Rights	Next Anticipated Step
Camlipixant						
Refractory Chronic Cough (BID Formulation)	<div></div>					2H 2024: CALM-1 Topline Results 2025: CALM-2 Topline Results
Refractory Chronic Cough (QD Formulation)	<div></div>					2Q 2023: Phase 1 Study Completion

Potential for
Additional
Cough
Indications

POTENTIAL COUGH INDICATIONS UNDER EVALUATION

- POST VIRAL COUGH
- IPF COUGH
- ASTHMA COUGH

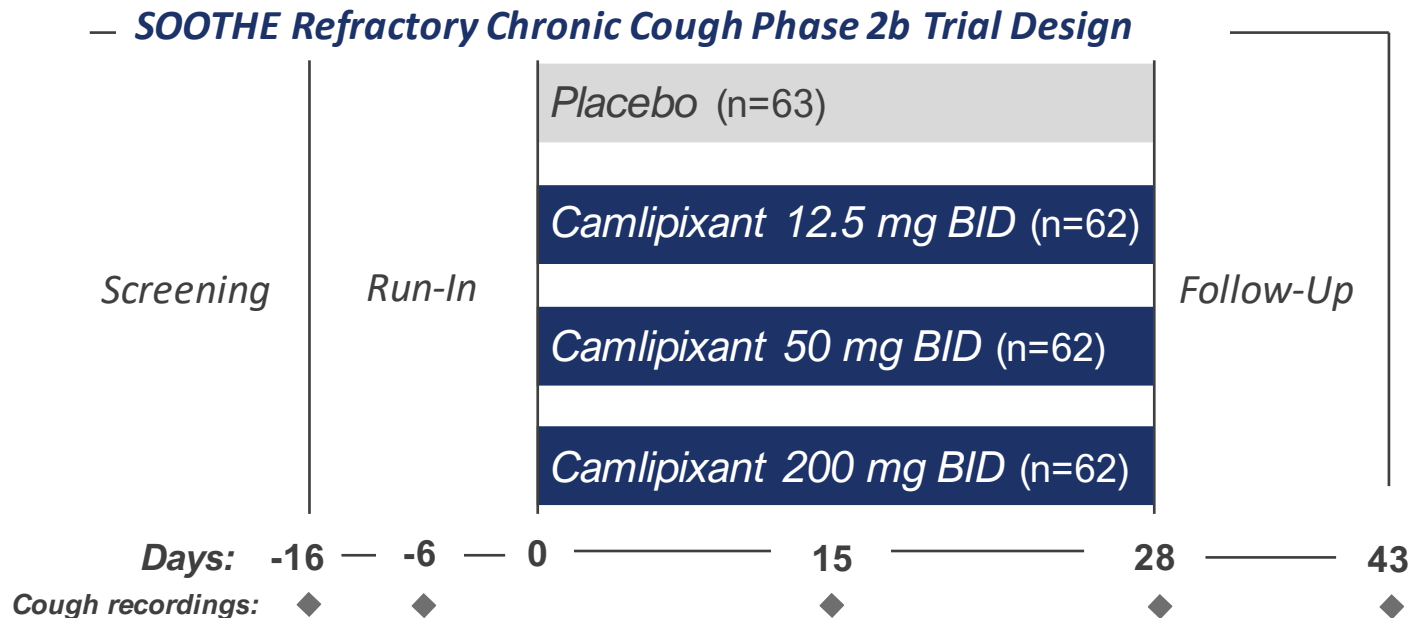


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SOOTHE Phase 2b Results

SOOTHE Trial Design

Randomized, double-blind, 4-week placebo-controlled parallel arm study with 3 active doses



PRIMARY ENDPOINT

Placebo-adjusted change from baseline in 24H cough frequency (Day 28)

SECONDARY ENDPOINTS

Leicester Cough Questionnaire (LCQ)
Cough Severity Visual Analogue Scale (CS-VAS)

POPULATION

Refractory chronic cough for ≥ 1 year

Awake cough frequency: ≥ 25 coughs/h

249 participants recruited from
64 North American sites (142 participants)
56 European sites (107 participants)

SOOTHE: Primary Efficacy Endpoint

Placebo-Adjusted Change in 24H Cough Frequency

34%
placebo-adjusted
reduction

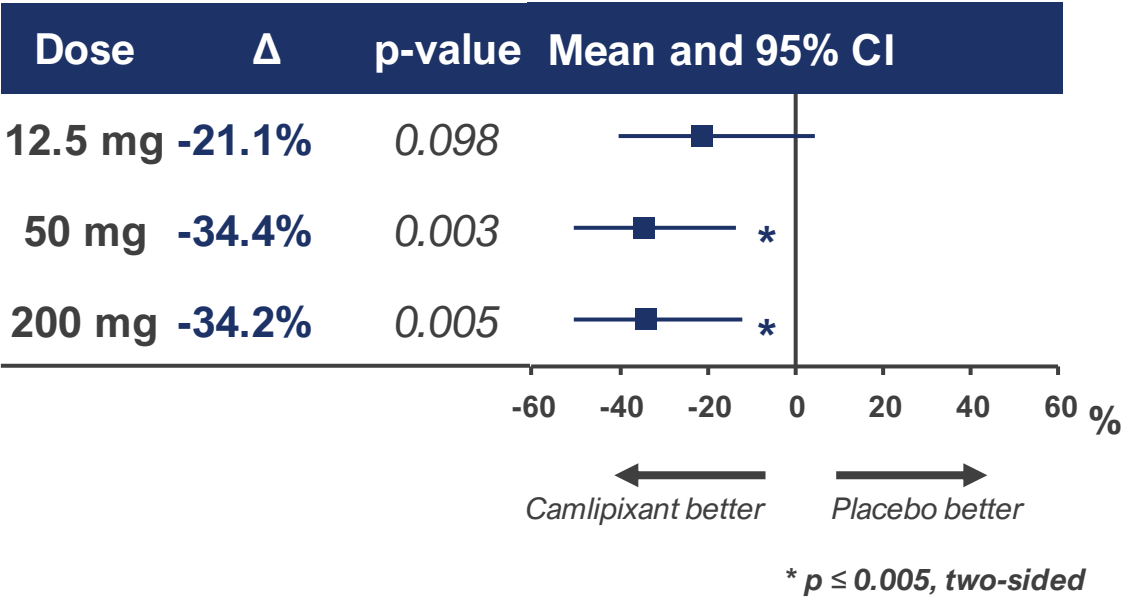
in 24-hour cough frequency at 50 mg and 200 mg BID doses ($p \leq 0.005$)

Dose response

observed between 12.5 mg and 50 mg BID doses

Placebo-adjusted 24H cough frequency change from baseline at Day 28¹

Intent-to-treat analysis



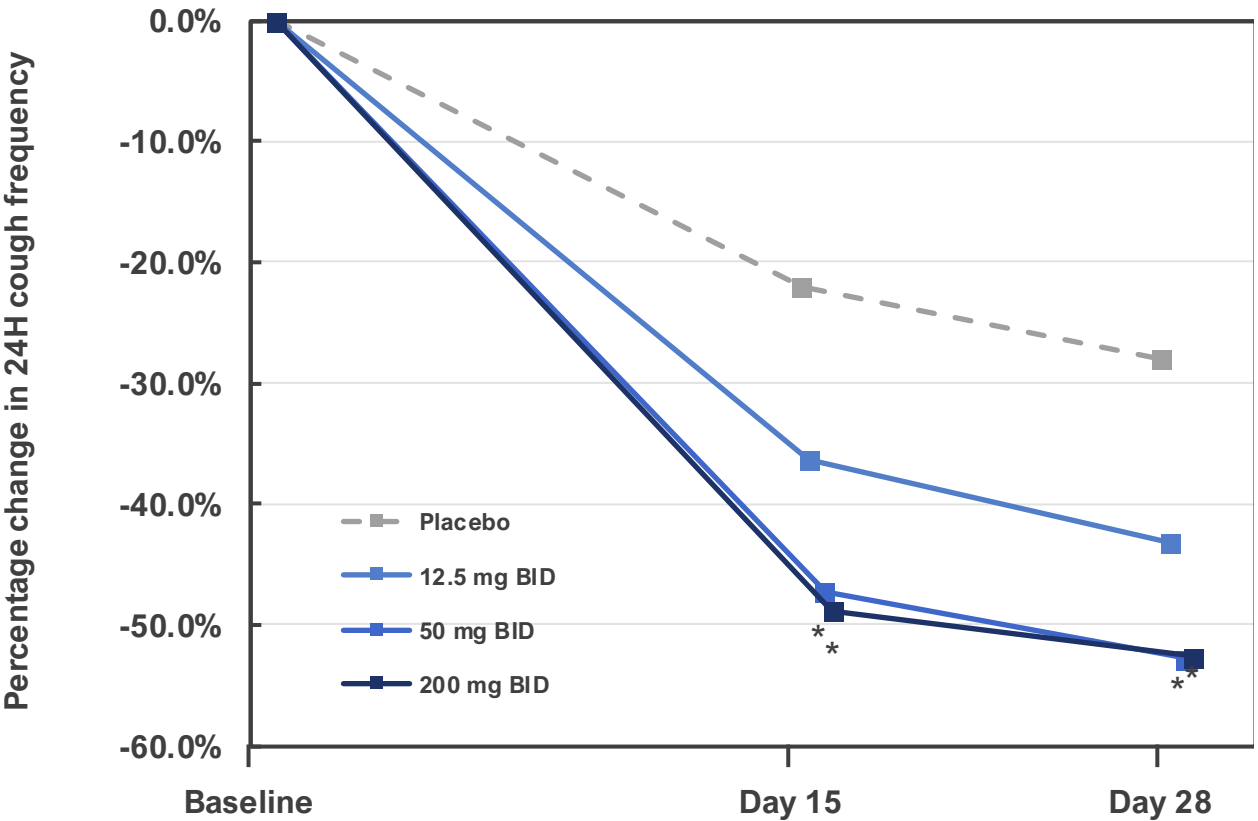
1. Geometric mean ratio of difference from baseline between camlipixant doses and placebo is estimated by back transformation of the LS mean difference. Percent treatment benefit over placebo in mean cough frequency is defined as $100 \times ((\text{geom. LS mean Ratio}) - 1)$.

SOOTHE: Change from Baseline in 24H Cough Frequency

53% reduction

from baseline in 24-hour cough frequency at day 28 with 50 mg and 200 mg BID doses

Relative change from baseline in 24H cough frequency (ITT)

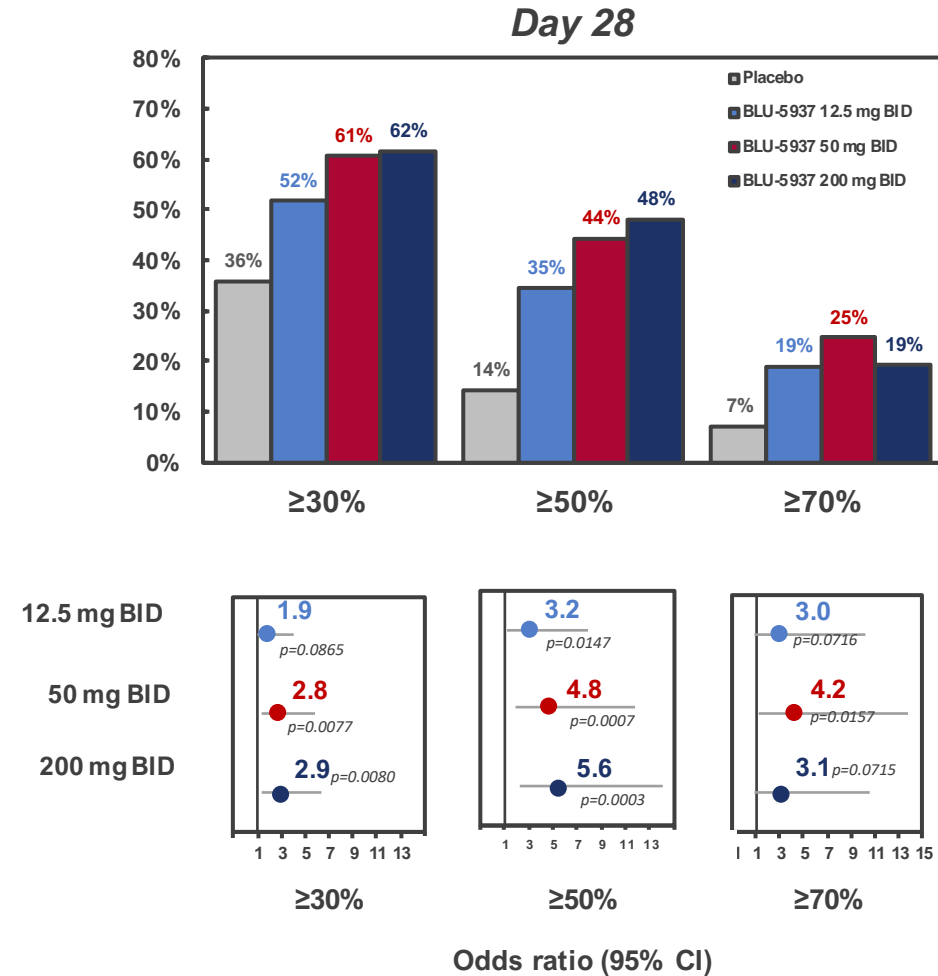


* $p \leq 0.005$, two-sided

SOOTHE: Responder Rates in 24H Cough Frequency

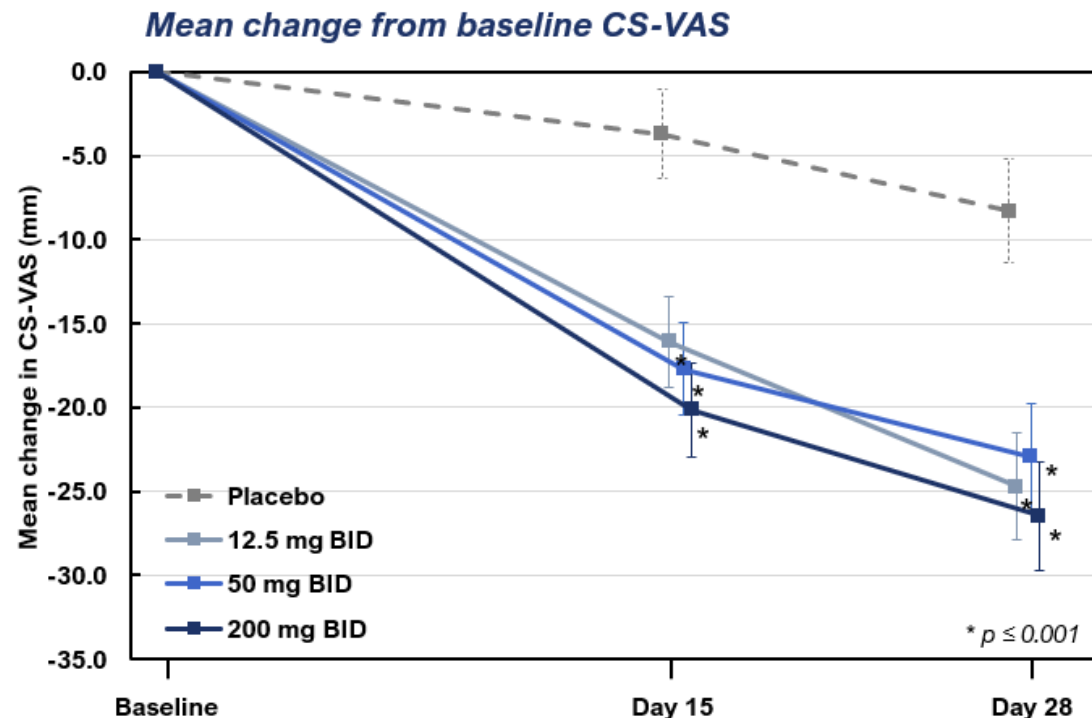
>60% of patients achieved $\geq 30\%$ reduction in cough frequency at therapeutic doses

Robust odds ratios favored treatment at every dose; almost all data points at therapeutic doses are statistically significant



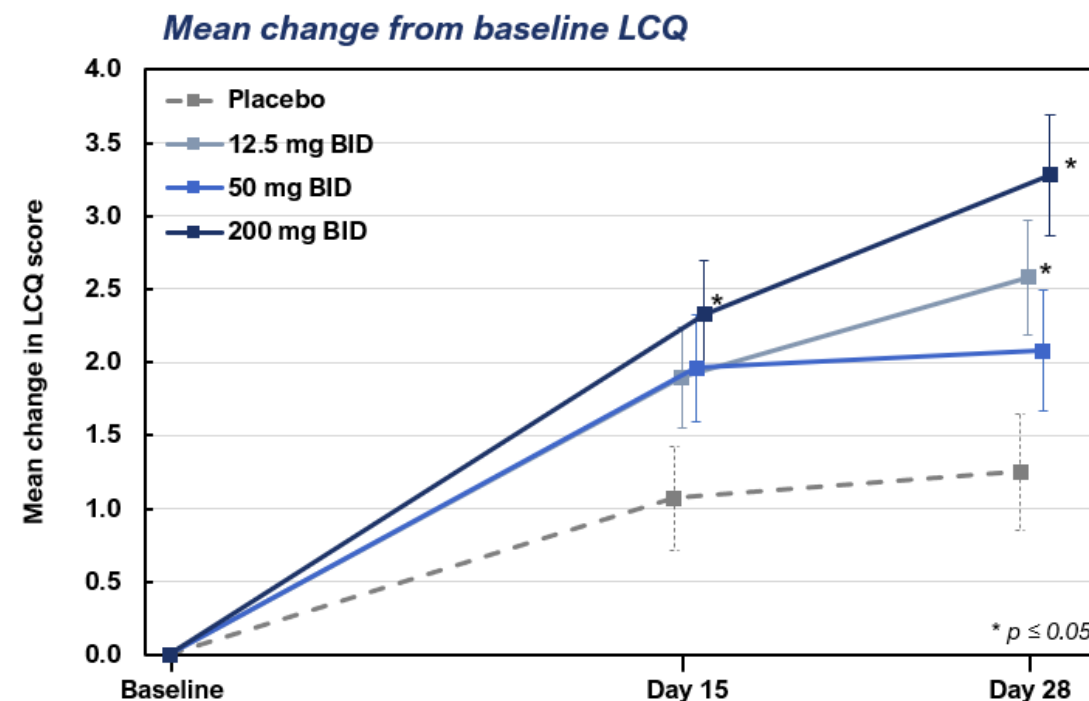
SOOTHE: Secondary Endpoints

Patient Reported Outcomes (PRO): Cough Severity Visual Analog Scale (CS-VAS) and Leicester Cough Questionnaire (LCQ)



Error bars represent SE

CS-VAS: scale of 0-100mm; Lower score = Less severe cough



Error bars represent SE

LCQ: scale of 3-21; Higher score = Lower impact on quality of life

Clinically meaningful and statistically significant benefit of camlipixant (BLU-5937) at multiple time points in patient reported outcomes

SOOTHE: Safety and Tolerability

n (%)	Placebo (n= 63)	Camlipixant 12.5 mg BID (n= 62)	Camlipixant 50 mg BID (n= 62)	Camlipixant 200 mg BID (n= 62)
Subjects with ≥1 TEAE	22 (34.9%)	23 (37.1%)	13 (21.0%)	19 (30.6%)
Subjects with ≥1 TESA	0	0	0	0
Subjects with TEAE leading to discontinuation, n (%)*	1 (1.6%)	0	0	2 (3.2%)
<i>Most Common TEAEs (≥5% at any dose)†</i>				
Nausea	0	0	5 (8.1%)	2 (3.2%)
Dysgeusia	0	3 (4.8%)	4 (6.5%)	3 (4.8%)
UTI	0	3 (4.8%)	0	0

Generally well-tolerated

Similar rate of treatment emergent adverse events (TEAEs) reported for placebo and camlipixant (BLU-5937)

SOOTHE: Low Taste-Related Adverse Events Associated to P2X3 Class

INCIDENCE OF TASTE DISTURBANCE ADVERSE EVENTS

	Placebo (n= 63)	Camlipixant 12.5 mg BID (n= 62)	Camlipixant 50 mg BID (n= 62)	Camlipixant 200 mg BID (n= 62)
Taste alteration (dysgeusia)	0	3 (4.8%)	4 (6.5%)	3 (4.8%)
Partial taste loss (hypogeusia)	0	0	0	0
Complete taste loss (ageusia)	0	0	0	0
Total taste disturbances	0	3 (4.8%)	4 (6.5%)	3 (4.8%)

Low rate of taste disturbance

adverse events at all doses ($\leq 6.5\%$) with:

- No loss of taste
- No discontinuations due to taste disturbance



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CALM Phase 3 Program

Ongoing CALM Program: Study Design

Two randomized, double-blind, placebo-controlled parallel arm trials with 2 active doses

POPULATION

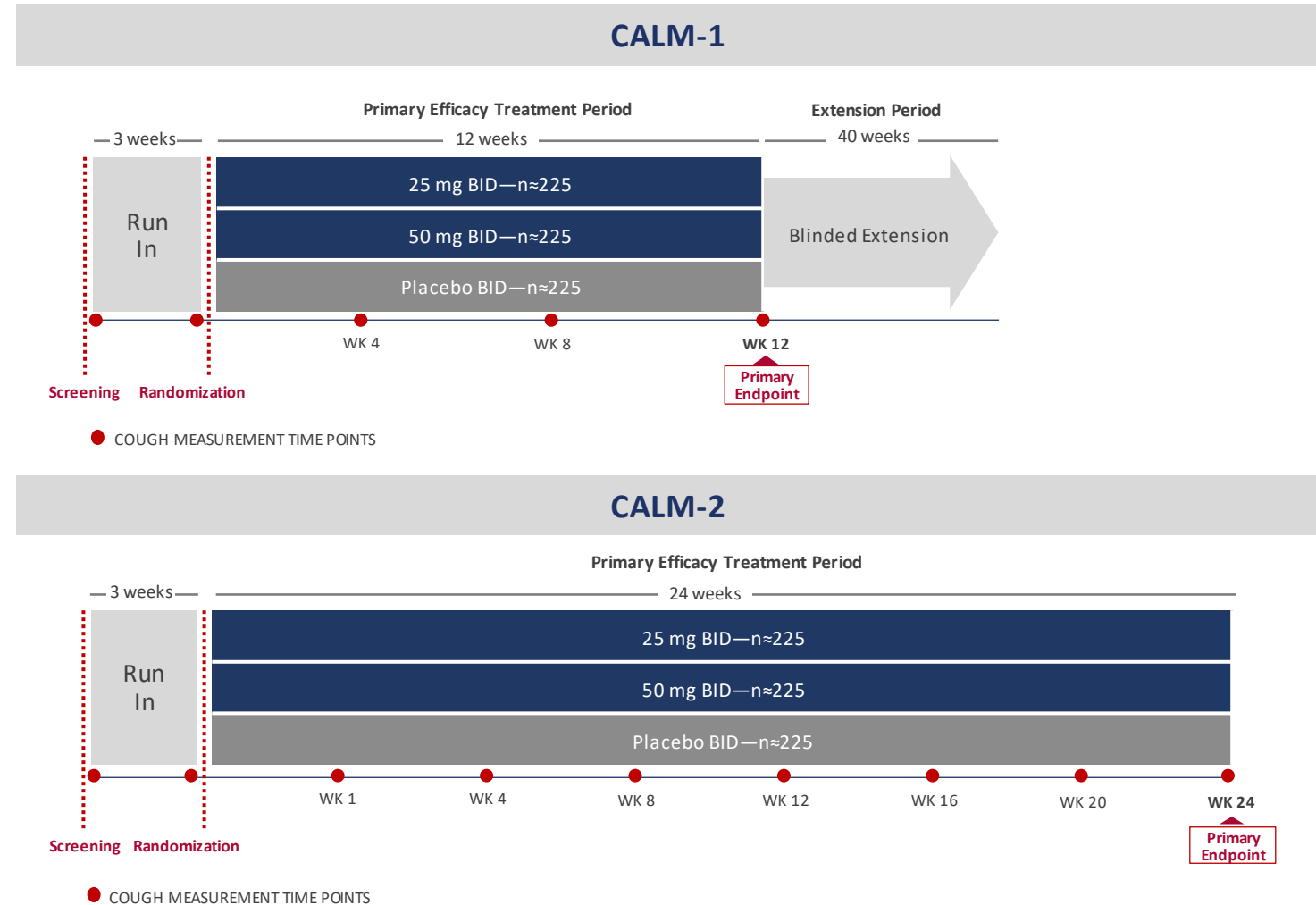
- Refractory/unexplained chronic cough
- Cough ≥ 1 year
- Enriched for baseline cough frequency
- CALM-1 and CALM-2: ~675 participants each
- ~285 global sites with 65% in North America and Western Europe

PRIMARY EFFICACY ENDPOINT

- 24H cough frequency (CF) in enriched population at 12-weeks (CALM-1) and 24-weeks (CALM-2)
- CALM-1 top-line expected in 2H 2024 and CALM-2 top-line expected in 2025

SAFETY

- Blinded extension to 52 weeks in CALM-1 and open-label extension in CALM-2



Ongoing CALM Program: Enrichment Strategy

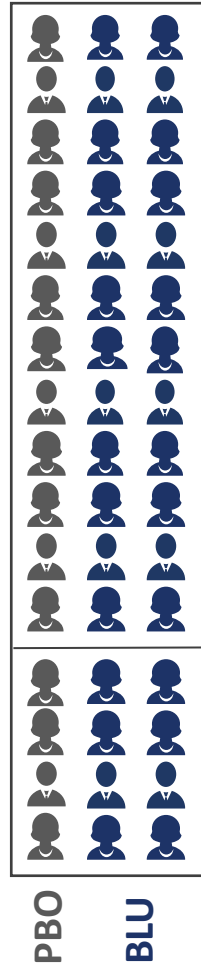
CALM-1 and CALM-2 populations to be enriched for baseline cough frequency

PRIMARY POPULATION

- ≥ 20 coughs/h (24H CF)
- Equivalent to ≥ 25 cough/h (awake CF) population in successful SOOTHE Phase 2b trial

EXTENDED POPULATION

- < 20 coughs/h (24H CF)
- Expected 1:3 ratio of Extended Population to Primary Population



PRIMARY EFFICACY ENDPOINT: COUGH FREQUENCY IN PRIMARY POPULATION (90% POWER)

- 24H cough frequency vs placebo in Primary Population

SECONDARY EFFICACY ENDPOINTS (80% POWER)

- Leicester Cough Questionnaire (LCQ), Cough Severity VAS (CS-VAS)
- 24H cough frequency vs placebo in Overall Population

Ongoing CALM Phase 3: VitaloJAK Cough Monitoring System

VitaloJAK is the cough recording and counting system used to capture the 24H cough frequency data in most cough trials

- Used in camlipixant (BLU-5937) and gefapixant RCC trials

The Company conducted validation work on VitaloJAK

- Validation work consisted of comparing compressed vs non-compressed recordings in SOOTHE Phase 2b trial participants
 - 45 SOOTHE Phase 2b trial participants showed a sensitivity of 98.7% with no systematic errors identified
- Validation protocol and statistical plan submitted to FDA in Q4 2022
- Validation work has no impact on start of Phase 3

VITALOJAK COUGH MONITORING DEVICE





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Market and Competitive Landscape

The Market for Refractory Chronic Cough in Key Regions

CHRONIC COUGH patients in key geographies

- ~10% prevalence in the U.S. & Europe-5¹
- ~4% prevalence in China

REFRACTORY CHRONIC COUGH patients in key geographies

- Refractory chronic cough patients represent an important segment of the chronic cough population¹:



~9M¹



~9M¹






~7M¹

Diagnosed prevalence rate is expected to outpace population growth due to:

- Aging population
- Increased diagnosis
- Increases in respiratory illnesses
- Potential for new treatment options

P2X3 Competitive Landscape¹

Best-in-class P2X3 selectivity may support favorable clinical and commercial profile if approved

	1 ST IN CLASS P2X3 ANTAGONIST	2 ND GENERATION P2X3 ANTAGONISTS	
Company	 MERCK	 SHIONOGI	 Bellus HEALTH
Candidate	Gefapixant	Sivopixant	Camlipixant (BLU-5937)
Stage of Development	Approved in Japan, Switzerland EU/US Under Review	Phase 2b	Phase 3
Expected Next Steps	Submit additional information in U.S./EU in 1H 2023*	Evaluating Next Steps**	CALM-1 topline results expected in 2H 2024
Dosing	BID	QD	BID / QD in development
P2X3 vs. P2X2/3 Selectivity	3-7x ²	~ 250x ³	~ 1500x

*Merck 10K, Feb 23, 2023. Merck's NDA for gefapixant received a CRL by U.S. FDA in February 2022;

**Shionogi R&D Day, October 2022

First-in-Class P2X3 Antagonist, Merck's MK-7264 (gefapixant)

MK-7264



First generation P2X3 antagonist
with low selectivity vs P2X2/3

**Reduces cough but with
Taste Side Effects**

Approved in Japan, Switzerland

**Additional information expected to
be filed in 1H 2023 to FDA and EMA**

Two Phase 3 Trials of gefapixant: COUGH-1 (12 week duration) and COUGH-2 (24 week duration)

Cough¹

18% & 15%

Placebo-adjusted
reduction in 24H
cough frequency
(primary endpoint)

Taste AEs¹

58% & 69%

of patients have
taste alteration
and/or taste loss

Shionogi's S-600918 (sivopixant)

Sivopixant



Selective P2X3 antagonist

Three doses tested with none achieving statistical significance¹

Trial completed in December 2020

Program under evaluation as of October 2022²

Phase 2b Trial (4 week duration)
300mg QD

Cough¹

12%

Placebo-adjusted reduction in 24H cough frequency (primary endpoint)

Taste AEs¹

33%

of patients with taste alteration and/or taste loss



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1. Sivopixant dose-finding study in RCC/UCC, Shionogi, Twelfth London International Cough Symposium, July 14th 2022
2. Shionogi R&D Day Presentation, October 11th 2022

Camlipixant (BLU-5937) Well-Positioned for Potential Class Differentiation

	Criteria	Camlipixant Considerations
Efficacy and Tolerability	<ul style="list-style-type: none">• Treatment effect vs. placebo• Taste effects	<ul style="list-style-type: none">• Positive Phase 2b results with potential best-in-class profile• Best-in-class selectivity• Well-designed clinical trials
Payer Preference	<ul style="list-style-type: none">• Price	<ul style="list-style-type: none">• Potential for modest premium to first in class P2X3 antagonist
Timing of Market Entry	<ul style="list-style-type: none">• Launch timing• HCP readiness• Referral and treatment patterns	<ul style="list-style-type: none">• Focused on efficient development program
Patient Persistence and Compliance	<ul style="list-style-type: none">• Ease of use, dosing regimen• Duration of treatment	<ul style="list-style-type: none">• Twice-daily formulation with once-daily formulation development started

CAMLIPIXANT WELL-POSITIONED TO BE A POTENTIAL LEADER IN P2X3 CLASS

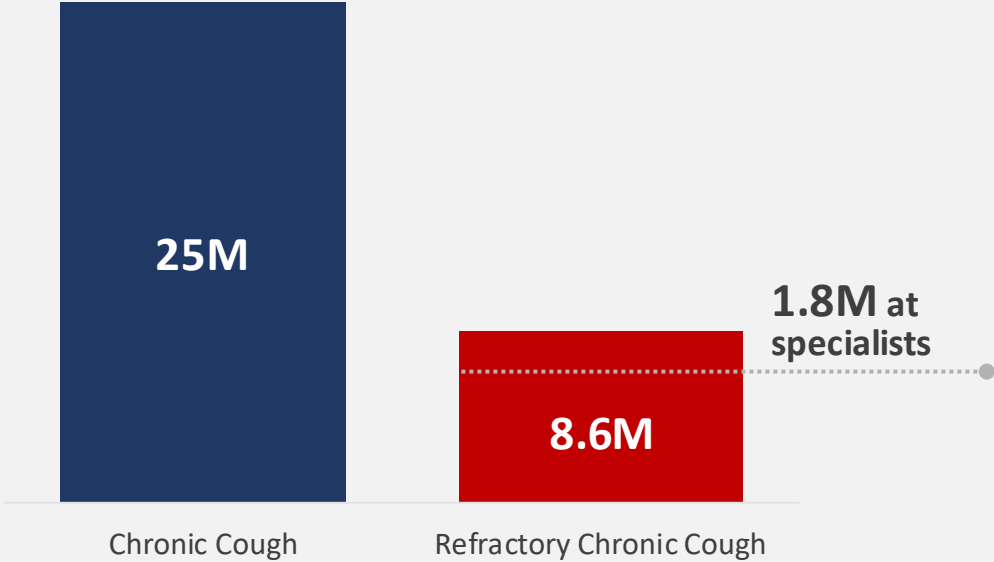


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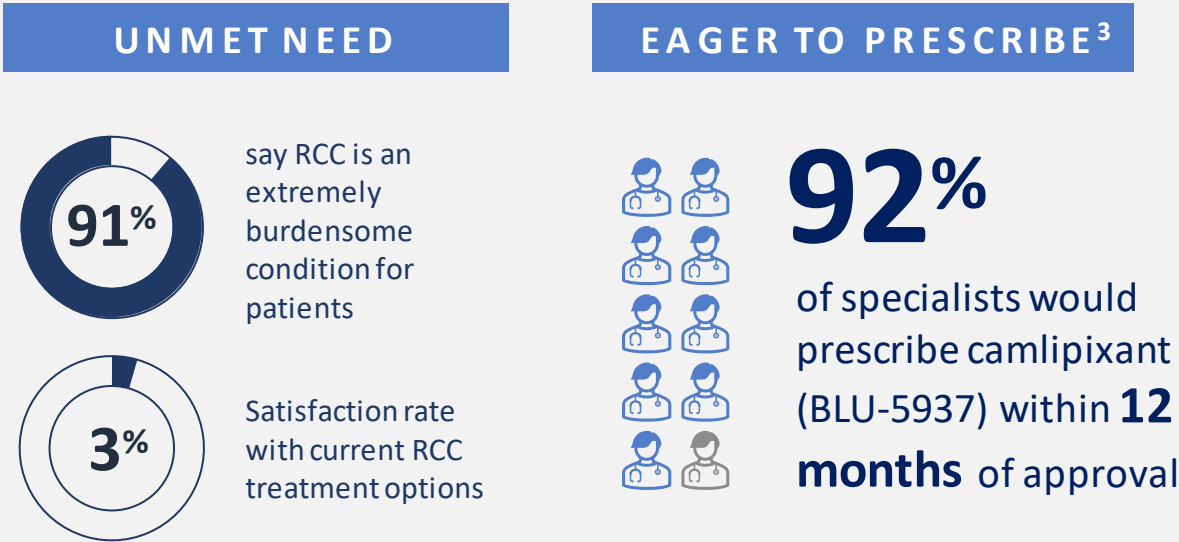
U.S. Commercialization Strategy

Updated Quantitative U.S. Physician Surveys Demonstrate Large RCC Patient Pool and Eagerness to Prescribe New Therapy

Number of CC/RCC Patients at Physician Offices Annually¹



Established Unmet Need and Willingness to Rx in RCC with Specialists²



Source: ZS Associates/Bellus Health Market Research (2022)

1. All-comer survey (n=1483) of US Pulmonologists (n=289), Allergists (n=207), Otolaryngologists (n=217), Gastroenterologists (n=197), and Primary Care Physicians (n=573)
 - "In a typical calendar year, of all the adult patients you see, how many Chronic Cough / Refractory Chronic Cough patients are you the physician **primarily responsible** for continuing to try to treat or monitor their persistent cough?"
2. Survey (n=179; >30 RCC patients per year) of US Pulmonologists, Allergists, Otolaryngologists, Gastroenterologists
3. "How much time would it take for you to prescribe Product Y (product with profile like camlipixant based on Phase 2b SOOTHE data) broadly to your patients with Refractory Chronic Cough (RCC)?"

Solid Foundation for U.S. P2X3 Market Success

EXISTS NOW



Awareness & Guidelines



High Treatment Rate



High Dissatisfaction with Standard of Care



Intent to Use P2X3



Payer Track Record of Reimbursing
Poor Quality-of-Life Conditions



New P2X3 Treatment

Medical Education

Payer Evidence

EXPECTED BY LAUNCH OF CAMLIPIXANT (BLU-5937)



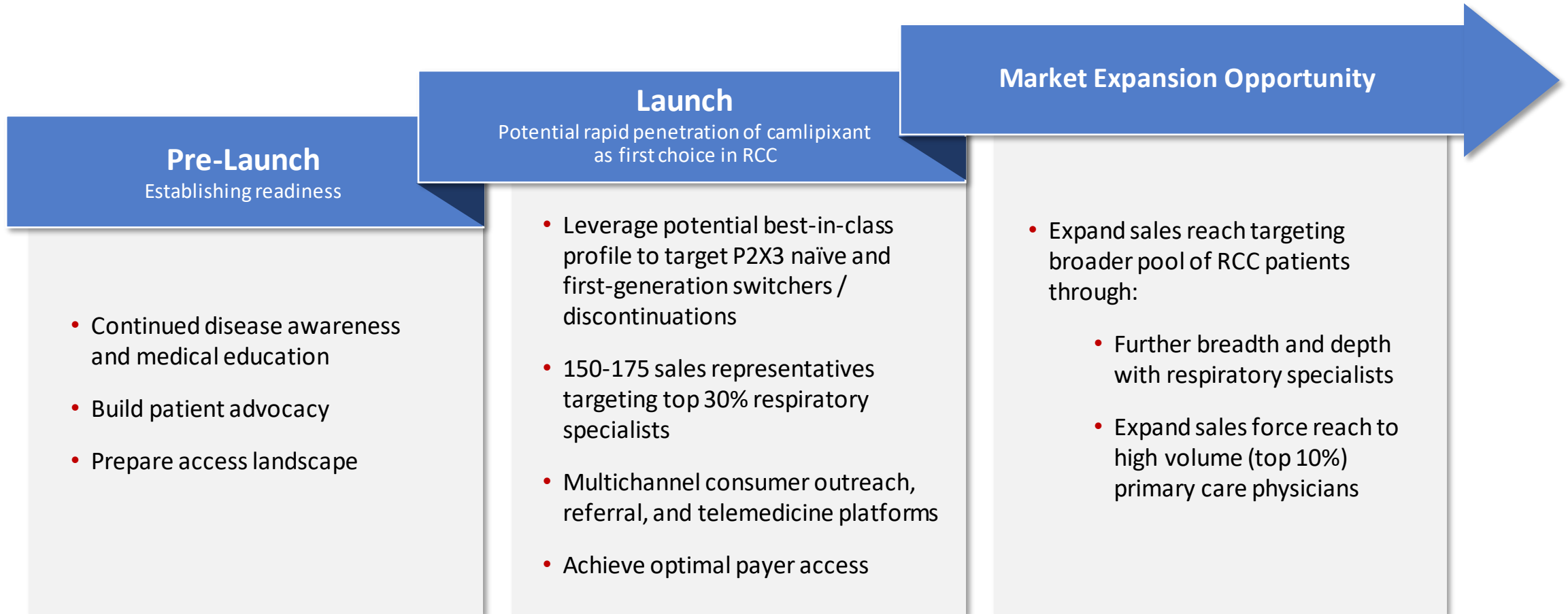
Prescription Patterns and Physician Experience with P2X3



P2X3 Pricing and Access Established with Payers

Camlipixant (BLU-5937): Early U.S. Commercialization Strategy

Initial Targeted Approach with Potential to Expand Alongside Market





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Camlipixant (BLU-5937)

Potential Additional Indications

Cough Hypersensitivity In Additional Cough Indications

Success of SOOTHE supports potential evaluation of camlipixant (BLU-5937) in other cough populations

Cough is an important health burden

- Across the U.S. in 2018, cough was the reason for¹:
 - 18.5M in-office physician consultations
 - 5M emergency visits

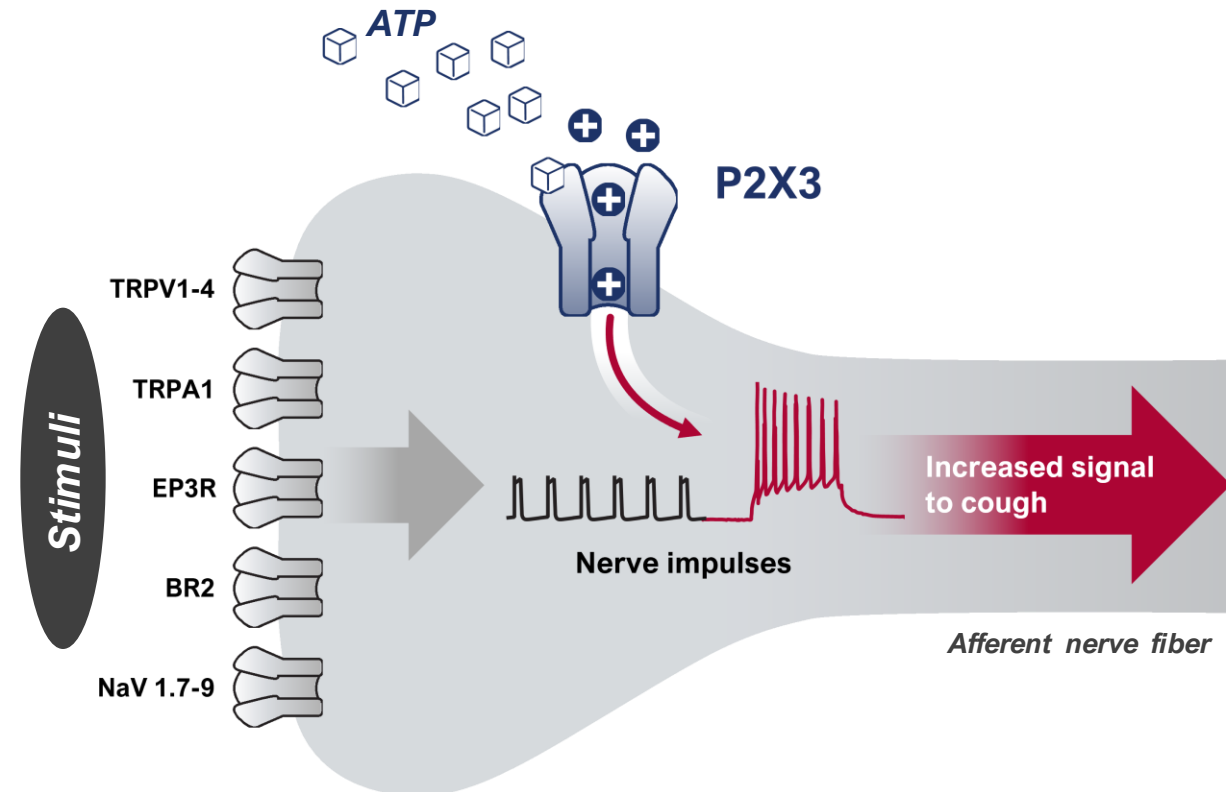
Potential cough hypersensitivity indications

- Post viral cough
- COPD cough
- IPF cough

Impact of SOOTHE Phase 2b Results

- Further validates role of P2X3 in cough hypersensitivity
- Leverage RCC learnings to study other cough populations

Role of P2X3 in cough hypersensitivity*



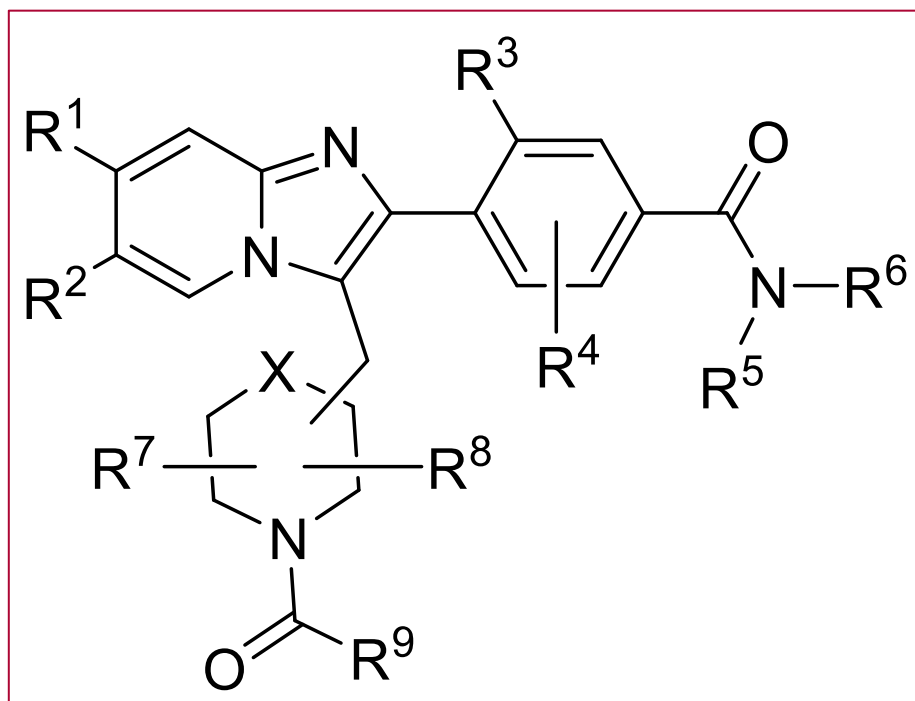


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IP and Corporate Summary

100% Owned Intellectual Property Portfolio

Camlipixant (BLU-5937) composition of matter patent expires in 2034



- All intellectual property 100% owned by BELLUS with no future obligations owed
- U.S. and international patent estate covering camlipixant and related compounds
- Composition of matter patent for camlipixant and related P2X3 antagonists granted in the U.S., Europe, Japan, and China (expires in 2034 not including potential patent term extension)
- Method of use patent for the treatment of cough granted in the U.S. (expires 2038)

Stock and Financial Information

CAPITAL STRUCTURE

126.6M basic shares

138.9M fully diluted shares

CASH POSITION

Cash, cash equivalent and short-term investments position of US\$337.1M*

Potential Catalysts & Upcoming Events

EXPECTED MILESTONES

Camlipixant (BLU-5937) in Refractory Chronic Cough

- ☒ CALM-1 & CALM-2 trial initiations (Q4 2022)
- ☐ Topline results from CALM-1 (2H 2024)
- ☐ Topline results from CALM-2 (2025)

Camlipixant Platform

- ☒ Once-daily extended release formulation Phase 1 trial initiation (Q4 2022)
- ☐ Topline results from Phase 1 QD formulation (Q2 2023)

EXPECTED EVENTS

Corporate Events

- ☐ Analyst Day (2H 2023)

Third Party P2X3 Programs

- ☐ Merck's gefapixant FDA resubmission (1H 2023)

Conferences

- ☒ AAAAI (Feb. 24-27, 2023)
- ☐ ACC (June 9-10, 2023)
- ☐ ASCPT (Mar. 22-24, 2023)
- ☐ ERS (Sept. 9-13, 2023)
- ☐ ATS (May 19-24, 2023)



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