BELLUS Health Announces Design for its Phase 2b Trial with BLU-5937 in Refractory Chronic Cough

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- Double-blind, 4-week placebo controlled, parallel arm trial will evaluate the efficacy and safety of 3 doses of BLU-5937 in 280 patients with refractory chronic cough –

- Trial to recruit patients with baseline cough count ≥25 coughs per hour -- RELIEF Phase 2 trial results demonstrated significant reductions in cough frequency in pre-specified analyses with patients ≥32 coughs/hour (50% of trial participants) and ≥20 coughs/hour (80% of trial participants) at baseline -

- Phase 2b trial expected to initiate in Q4 2020 with interim analysis in mid-2021 and topline data in 2H 2021 -

LAVAL, Quebec--(BUSINESS WIRE)--Sep. 8, 2020-- BELLUS Health Inc. (NASDAQ:BLU; TSX:BLU) (“BELLUS Health” or the “Company”), a clinical-stage biopharmaceutical company developing novel therapeutics for the treatment of refractory chronic cough and other hypersensitization-related disorders, today announced the planned trial design for SOOTHE, the Company’s Phase 2b dose confirmation trial evaluating the efficacy and safety of BLU-5937 in refractory chronic cough (RCC). The Phase 2b trial is designed based on the results from the Company’s previous Phase 2 RELIEF trial including the finding that baseline cough frequency is a key indicator of treatment benefit.

“Building on the results from our RELIEF trial where there was a significant and clinically meaningful improvement observed in patients with baseline cough frequencies ≥20 coughs per hour when treated with BLU-5937, we believe our plan to recruit patients with baseline cough frequencies ≥25 coughs per hour for the SOOTHE trial provides the best strategy for success in this patient population,” said Cathy Bonuccelli, Chief Medical Officer at BELLUS Health. “Additional exploratory arms of patients with baseline cough frequencies <25 coughs per hour will allow us to collect additional data to better inform the design of our Phase 3 program.”

SOOTHE Phase 2b Trial Design

The SOOTHE Phase 2b trial is planned as a multicenter, randomized, double-blind, 4-week, parallel arm study evaluating three doses of BLU-5937 (12.5 mg, 50 mg and 200 mg BID) in 280 patients with refractory chronic cough versus placebo. 240 participants with a baseline cough count of ≥25 awake coughs per hour are expected to be randomized across four arms (1:1:1:1) evaluating the three active doses and placebo in the main study. Treatment arms will be stratified by baseline awake cough frequency to help balance the baseline cough count across trial arms. The primary efficacy endpoint will be the placebo-adjusted change in the 24-hour cough frequency using a cough recorder in the main study. An additional 40 participants with a baseline cough count <25 awake coughs per hour are expected to be randomized across 2 arms (1:1) evaluating one active dose (200 mg BID) and placebo to further investigate the effect of BLU-5937 in an exploratory analysis.

The trial is expected to enroll participants in approximately 100 sites, including 50 centers in the United States. The first patient is expected to be dosed in Q4 2020.

An interim analysis is expected to be conducted once 50% of patients have completed the main study and is anticipated in mid-2021. Using a predefined probability of efficacy hurdle, results from the interim analysis may be used to help select dose(s) for Phase 3 and initiate Phase 3 planning, including health authority interactions. Topline results from SOOTHE are expected in 2H 2021.

The Company has confirmed a meeting with FDA in Q4 2020 and any adjustments to trial design or our expected timeline based on FDA feedback will be disclosed thereafter.

Learnings from RELIEF Phase 2 Data

The previous Phase 2 RELIEF trial indicated a significant interaction between baseline cough frequency and the response to BLU-5937. Pre-specified analyses regarding the impact of baseline cough frequency on treatment effect, including subgroup analyses in participants with baseline awake cough frequency of ≥20 coughs/hour and ≥32 coughs/hour (median), revealed statistically significant and clinically meaningful reductions in cough frequency relative to placebo:

- Patients with ≥20 coughs/hour (80% of trial patients) saw placebo adjusted reduction in awake cough frequency of 20% (p=0.001), 18% (p=0.02), 19% (p=0.03) and 27% (p=0.003) at doses of 25, 50, 100 and 200 mg BID respectively.
- Patients above the median with ≥32 coughs/hour at baseline (50% of trial patients) saw placebo adjusted reduction in awake cough frequency of 28%, 28%, 30% and 32% (all p< 0.0015) at doses of 25, 50, 100 and 200 mg BID respectively.
- A statistically significant relationship (p=0.0258) was observed between average awake cough frequency at baseline and treatment effect, linking increased baseline cough frequency with improved treatment benefit.

“The SOOTHE Phase 2b trial represents a significant milestone for BELLUS and patients suffering from refractory chronic cough,” said Roberto Bellini, President and CEO of BELLUS Health. "We believe we have optimized our clinical strategy based on the RELIEF trial results and are excited about initiating the SOOTHE Phase 2b trial later this year.”

About the Phase 2 RELIEF Trial

RELIEF was a randomized, placebo-controlled, two-period crossover, dose-escalation study to assess the efficacy, safety and tolerability of BLU-5937, a highly selective P2X3 antagonist, at four doses: 25, 50, 100 and 200 mg, administered orally, twice-daily. RELIEF enrolled a total of 68

refractory chronic cough patients from 16 sites in the United Kingdom and United States. Further details on the RELIEF trial design and results can be found at on the Company's website.

About BLU-5937

BLU-5937, a highly selective P2X3 antagonist - (>1500 fold) - is in development for chronic cough, chronic pruritus and other hypersensitization-related disorders.

The P2X3 receptor in the cough reflex pathway, which is implicated in chronic cough, is a rational target for treating chronic cough, and it has been evaluated in multiple clinical trials with different P2X3 antagonists. The Company believes that its highly selective P2X3 antagonist has the potential to reduce coughing in patients with chronic cough while maintaining taste function through targeted inhibition of P2X3 receptors rather than P2X2/3 receptors which play a major role in taste.

In addition to chronic cough and chronic pruritus, BLU-5937 may also have broad applicability across other afferent hypersensitization-related disorders, enabling the Company to consider developing a pipeline of therapies using its P2X3 platform. BELLUS Health is exploring how P2X3 activation can contribute to irritation and pain, and whether inhibition of P2X3 receptors can help treat these afferent hypersensitization-related disorders.

About BELLUS Health (www.bellushealth.com)

BELLUS Health is a clinical-stage biopharmaceutical company developing novel therapeutics for the treatment of chronic cough and other hypersensitization-related disorders. The Company's product candidate, BLU-5937, is being developed for the treatment of chronic cough and chronic pruritus.

Chronic cough, the lead indication for BLU-5937, is a cough lasting more than eight weeks and is associated with significant adverse physical, social and psychosocial effects on health and quality of life. It is estimated that approximately 26 million adults in the United States suffer from chronic cough with approximately 3 million having refractory chronic cough lasting for more than a year and approximately 6 million having refractory chronic cough lasting more than 8 weeks and under one year. There is no specific therapy approved for refractory chronic cough and current treatment options are limited.

Chronic pruritus, commonly known as chronic itch, is an irritating sensation that leads to scratching, and persists for longer than six weeks, which can be debilitating and has a significant impact on quality-of-life. It is a hallmark of many conditions, including atopic dermatitis (AD). It is estimated that chronic pruritus associated with AD affects more than 16.9 million adults in the United States.

Forward-Looking Statements

Certain statements contained in this news release, 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's control. Such statements include, but are not limited to, the design, timing and outcome of its Phase 2b trial of BLU-5937 in refractory chronic cough, including with respect to design, timing and benefits of the interim analysis, the timing of initiation and topline results and the benefits of recruiting patients with a higher baseline cough count, the timing and outcome of interactions with FDA and other health authorities, the timing and outcome of Phase 3 planning, the potential of BLU-5937 to successfully treat chronic cough, chronic pruritus and other hypersensitization-related disorders, BELLUS Health's expectations related to its preclinical studies and clinical trials, including its clinical development plan, the potential tolerability profile, selectivity and other characteristics of BLU-5937 as compared to other competitor candidates and the potential applicability of BLU-5937 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: feedback from FDA and other health authorities on clinical trial design, dose selection and indication, 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 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, stock market volatility, fluctuations in costs, changes to the competitive environment, achievement of forecasted burn rate, potential payments/outcomes in relation to indemnity agreements and contingent value rights, achievement of forecasted preclinical study and clinical trial milestones, reliance on third parties to conduct preclinical studies and clinical trials for BLU-5937 and that actual results may vary 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 BLU-5937 and other product candidates. 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 news release. 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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Danny Matthews
Director, Investor Relations and Communications

danny@bellushealth.com

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