Arbutus Announces Positive Preliminary Phase 1a/1b Clinical Trial Results for AB-729, a Proprietary GalNAc Delivered RNAi Compound in Development for People Living with Chronic Hepatitis B

March 26, 2020

Positive single dose AB-729 data in chronic hepatitis B subjects supports further clinical development

First multiple dose cohort results expected in second half of 2020

One or more additional single dose cohorts planned to further optimize antiviral response and dosing frequency with results expected in the second half of 2020

Conference call and webcast scheduled today at 4:30 PM ET

WARMINSTER, Pa., March 26, 2020 (GLOBE NEWSWIRE) -- Arbutus Biopharma Corporation (Nasdaq: ABUS), a Hepatitis B Virus (HBV) therapeutic solutions company, today announced positive preliminary results from a Phase 1a/1b clinical trial (AB-729-001) in healthy subjects and two cohorts of chronic hepatitis B subjects on nucleos(t)ide antiviral therapy, all of whom received a single subcutaneous injection of AB-729. AB-729-001 is an ongoing Phase 1a/1b clinical trial designed to determine the most effective dose and dosing interval for use in future Phase 2 combination clinical trials.

William Collier, President and Chief Executive Officer of Arbutus, stated, “These encouraging preliminary results demonstrate that AB-729 is a potent RNAi agent capable of reducing HBsAg plasma levels and support its further development as a treatment for people living with chronic hepatitis B. Our plan is to move forward into the multiple dose portion of the clinical trial with the 60 mg dose and, in parallel, to explore additional single dose cohorts beginning with the 90 mg dose. We intend to initiate these cohorts as soon as possible; however, at this point, it is not possible to predict if the COVID-19 pandemic will negatively impact our plans and timelines. Provided we can execute our clinical trials as planned, we continue to expect these data sets in the second half of the year.”

Mean HBsAg changes from baseline:

	60 mg Cohort (N=6)	180 mg Cohort (N=4)
Day 29 mean log10 IU/mL (SE)	-0.24[#] (0.13)	-0.81* (0.38)
Week 12 mean log10 IU/mL (SE)	NA	-0.98 (0.22)

[#]In the 60 mg cohort, the maximum Day 29 decline was -0.62 log10.
*In the 180 mg cohort, excluding one subject with a HBsAg decline of -1.94 log10, the mean (SE) reduction for the remaining 3 subjects was -0.44 log10 (0.07) at Day 29 and -0.77 log10 (0.06) at Week 12.

Dr. Gaston Picchio, Chief Development Officer of Arbutus, stated, “AB-729 dosed at either 60 mg or 180 mg in chronic hepatitis B subjects was generally safe and well tolerated and resulted in meaningful reductions in HBsAg levels. Additionally, after a single 180 mg dose, HBsAg levels continued to decline well beyond Week 12, suggesting that AB-729 has the potential to be dosed less frequently than every four weeks.”

Dr. Picchio added, “The subject receiving the 180 mg dose who experienced the highest HBsAg decline also experienced a Grade 3 ALT/AST flare. While the flare may have been related to an acute gastroenteritis and self-medication, we believe evaluating at least one additional single dose cohort starting at 90 mg is appropriate and should allow us to determine if a mid-dose would provide the greatest benefit in terms of safety, efficacy and dosing interval.”

Preliminary safety summary in healthy subjects

- In the 60 mg, 180 mg and 360 mg cohorts, no serious adverse events (SAEs) were observed; most adverse events (AEs) were mild (13/15) and considered unrelated (12/15) to AB-729.
- Two subjects in the 360 mg cohort had asymptomatic, reversible Grade 3 ALT elevations assessed as related to AB-729. Neither subject had meaningful changes in any other laboratory parameter excepting Grade 1 or 2 AST elevation.
- There were no other clinically relevant abnormalities in laboratory tests, ECGs, or vital signs.

Preliminary safety and efficacy summary in chronic HBV subjects

- HBsAg declines were observed in all 4 subjects (3 HBeAg negative, 1 HBeAg positive) in the 180 mg cohort, with a mean HBsAg (SE) log10 reduction of -0.81 (0.38) at Week 4 and -0.98 (0.22) at Week 12.
- In the 180 mg cohort, maximum HBsAg decline of -1.94 log10 occurred at Week 4 in one subject (HBeAg negative). HBsAg declines continued beyond Week 12 for 2/3 subjects in the 180 mg cohort with available data, exceeding -1.00 log10 in both subjects. A 4th subject in the 180 mg cohort had continuous HBsAg decline up to 12 weeks post-dose, with a

maximum decline of -0.73 log10 at Week 12 (the last available time point).

- Mean log10 (SE) HBsAg decline in the 6 subjects in the 60 mg cohort (all HBeAg negative) was -0.24 (0.13) at Day 29. The maximum HBsAg decline in this cohort was -0.62 log10 at Day 29. Subjects in the 60 mg cohort will continue to be followed for twelve weeks. At this time only the four week data are available for the 60 mg cohort.

- In chronic hepatitis B subjects administered 180 mg (N=4) or 60 mg (N=6) of AB-729 there were no SAEs. In the 180 mg cohort, 8 AEs were observed and included asymptomatic, transient Grade 1 ALT/AST in 1 subject, Grade 1 ALT only in 1 subject, and 1 subject with Grade 1 ALT /AST at baseline who experienced unrelated gastroenteritis and self-medicated associated with transient Grade 3 ALT/AST elevations. In the 60 mg cohort, 2 AEs were observed, and all subjects had normal ALT/AST levels.

Summary of clinical trial design

Study AB-729-001 is an ongoing first-in-human clinical trial of AB-729 consisting of three parts:

- In Part 1, 3 cohorts of healthy subjects were randomized 4:2 to receive single doses (60mg, 180mg or 360mg) of AB-729 or placebo.

- In Part 2, non-cirrhotic, HBeAg positive or negative, chronic hepatitis B subjects (N=6) currently taking nucleos(t)ide antiviral therapy with HBV DNA below the limit of quantitation received single doses (60mg or 180mg) of AB-729. All subjects continued their nucleos(t)ide antiviral therapy throughout the trial. Part 2 is designed to include dosing of AB-729 in HBV DNA positive chronic hepatitis B subjects.

- In Part 3, chronic hepatitis B subjects, HBV DNA negative first and HBV DNA positive later, will receive multiple doses of AB-729 for up to six months.

COVID-19

In December 2019 an outbreak of a novel strain of coronavirus (COVID-19) was identified in Wuhan, China. This virus continues to spread globally, has been declared a pandemic by the World Health Organization and has spread to nearly every country in the world. The impact of this pandemic has been, and will likely continue to be, extensive in many aspects of society. The pandemic has resulted in and will likely continue to result in significant disruptions to businesses. A number of countries and other jurisdictions around the world have implemented extreme measures to try and slow the spread of the virus. These measures include the closing of businesses and requiring people to stay in their homes, the latter of which raises uncertainty regarding the ability to travel to hospitals in order to participate in clinical trials. Additional measures that have had, and will likely continue to have, a major impact on clinical development, at least in the near-term, include shortages and delays in the supply chain, and prohibitions in certain countries on enrolling subjects in new clinical trials (e.g. in Australia). It is not possible to predict if the COVID-19 pandemic will negatively impact our plans and timelines.

About AB-729

AB-729 is a RNA interference (RNAi) therapeutic targeted to hepatocytes using Arbutus' novel covalently conjugated N-acetylgalactosamine (GalNAc) delivery technology that enables subcutaneous delivery. AB-729 inhibits viral replication and reduces all HBV antigens, including hepatitis B surface antigen in preclinical models. Reducing hepatitis B surface antigen is thought to be a key prerequisite to enable reawakening of a patient's immune system to respond to the virus.

Conference Call and Webcast Today

Arbutus will hold a conference call and live webcast today, March 26, 2020 at 4:30 PM Eastern Time, to discuss the preliminary Phase 1a/1b clinical trial results for AB-729. You can access the live webcast, which will include presentation slides, through the Investors section of Arbutus' website at www.arbutusbio.com or directly at Live Webcast. Alternatively, please dial (866) 393 - 1607 or (914) 495 - 8556 and reference conference ID 2169859.

An archived webcast will be available on the Arbutus website after the event.

About Arbutus

Arbutus Biopharma Corporation is a publicly-traded (Nasdaq: ABUS) biopharmaceutical company dedicated to discovering, developing, and commercializing a cure for patients suffering from chronic hepatitis B (HBV) infection. Arbutus is developing multiple drug candidates, each of which have the potential to improve upon the standard of care and contribute to a curative combination regimen. For more information, visit www.arbutusbio.com.

Forward-Looking Statements and Information

This press release contains forward-looking statements within the meaning of the Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, and forward-looking information within the meaning of Canadian securities laws (collectively, "forward-looking statements"). Forward-looking statements in this press release include statements about our expectations regarding the timing and clinical development of our product candidates, including the evaluation of multiple dose and additional single-dose cohorts in our Phase 1a/1b clinical trial for AB-729 during 2020; and the potential for our drug candidates to improve upon the standard of care and contribute to a curative combination regimen for chronic HBV.

With respect to the forward-looking statements contained in this press release, Arbutus has made numerous assumptions regarding, among other things: the effectiveness and timeliness of preclinical studies and clinical trials, and the usefulness of the data; the timeliness of regulatory approvals; the continued demand for Arbutus' assets; and the stability of economic and market conditions. While Arbutus considers these assumptions to be reasonable, these assumptions are inherently subject to significant business, economic, competitive, market and social uncertainties and contingencies, including uncertainties and contingencies related to the ongoing COVID-19 pandemic.

Additionally, there are known and unknown risk factors which could cause Arbutus' actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements contained herein. Known risk factors include, among others: anticipated pre-clinical studies and clinical trials may be more costly or take longer to complete than anticipated, and may never be initiated or completed, or may not generate results that warrant future development of the tested drug candidate; changes in Arbutus' strategy regarding its product candidates and clinical development activities; Arbutus may not receive the necessary regulatory approvals for the clinical development of Arbutus' products; economic and market conditions may worsen; market shifts may require a change in strategic focus; and the ongoing COVID-19 pandemic could significantly disrupt our clinical development programs.

A more complete discussion of the risks and uncertainties facing Arbutus appears in Arbutus' Annual Report on Form 10-K, Arbutus' Quarterly Reports on Form 10-Q and Arbutus' continuous and periodic disclosure filings, which are available at www.sedar.com and at www.sec.gov. All forward-looking statements herein are qualified in their entirety by this cautionary statement, and Arbutus disclaims any obligation to revise or update any such forward-looking statements or to publicly announce the result of any revisions to any of the forward-looking statements contained herein to reflect future results, events or developments, except as required by law.

Contact Information

Investors and Media
William H. Collier
President and CEO
Phone: 604-419-3200
Email: ir@arbutusbio.com

Pam Murphy
Investor Relations Consultant
Phone: 604-419-3200
Email: ir@arbutusbio.com

Source: Arbutus Biopharma Corporation