

# **Arbutus Presents HBV Drug Combination Studies at ICAR**

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Combinations of Arbutus' RNAi or Capsid Assets with Approved Drugs Demonstrate Complementary Activity Dr. Michael J. Sofia, Arbutus' Chief Scientific Officer, Awarded International Society of Antiviral Research Gertrude Elion Award

VANCOUVER, British Columbia and WARMINSTER, Pa., May 22, 2017 (GLOBE NEWSWIRE) -- Arbutus Biopharma Corporation (Nasdaq:ABUS), an industry-leading Hepatitis B Virus (HBV) therapeutic solutions company, today presented results from preclinical studies of HBV drugs in three presentations at the 30th International Conference on Antiviral Research (ICAR) held on May 21-25, 2017 in Atlanta, GA. These presentations feature preclinical data from multiple Arbutus pipeline programs that highlight the potential of Arbutus' therapeutic candidates to impair HBV viral functions and demonstrate additive to synergistic activity when combining Arbutus assets with approved HBV therapies.

#### **Arbutus ICAR Presentations**

"Systematic In Vitro Evaluation of Current and Experimental Hepatitis B Therapeutics: Potential Utility for Combinations Exploiting Multiple and Diverse Mechanisms of Action" by Andrea Cuconati, Director of Virology

In preclinical studies, multiple clinical and preclinical Arbutus direct acting antiviral agents tested in combination with nucleoside/nucleotide analogues (NAs) or interferon  $\alpha$ -2a (IFN) standard of care therapeutics resulted in either additive or synergistic effects, suppressing multiple elements of HBV including HBsAg, HBeAg and HBV DNA. The results confirm the utility of Arbutus' agents in clinical combinations with standard of care. Arbutus RNAi agents ARB-1467 and ARB-1740 are currently in Phase II clinical testing in chronic HBV patients and AB-423, a capsid assembly inhibitor, is in Phase I.

"Activation of STING Mediates Antiviral Effects in a Mouse Model of Chronic Hepatitis B" by Emily Thi, Principal Scientist, In Vivo Pharmacology and Macro-Molecular Discovery

In preclinical studies, STING activation results in control of HBV. Repeated STING activation yielded cumulative reductions in HBV DNA and HBcAg across a 7-day course of study. Type I IFN and cytokine induction may activate innate immune cells and T cell priming to potentially break HBV immune tolerance. These findings provide proof of concept that targeting STING in chronic HBV infection may contribute to viral control and complement the immune modulatory programs underway at Arbutus.

"Viral Hepatitis — The Search for a Cure" by Dr. Mike Sofia, Chief Scientific Officer

An introduction to the HBV landscape and an overview of the potential new therapies that may overcome the challenge of persistent chronic HBV infection and achieve a functional cure.

## **Highlights from the Studies Presented:**

- Our clinical assets ARB-1740, AB-423 and preclinical assets ARB-880, ARB-1820 and ARB-168786, when used in combination with the 'NA and IFN' standard of care, demonstrate at least additive, and in some cases synergistic, anti-HBV activity.
- Preclinical capsid assembly inhibitors ARB-880, ARB-1820 and ARB-168786 show potent and highly selective inhibition of HBV replication. Arbutus expects to nominate a 2nd generation capsid assembly development candidate this year.
- These results continue to support Arbutus' combination strategy to develop an HBV cure.

These presentations can be accessed by visiting the Investor section of <a href="https://www.arbutusbio.com">www.arbutusbio.com</a> and selecting Events and Presentations.

In conjunction with ICAR, Dr. Michael J. Sofia, Arbutus' Chief Scientific Officer has been awarded the International Society of Antiviral Research (ISAR) Gertrude Elion Award for his outstanding contributions to the antiviral field through his development of a landmark hepatitis C virus (HCV) treatment.

"It is a great honor to receive the ISAR Gertrude Elion Award for my work that led to the discovery of sofosbuvir, which is the backbone of the curative standard of care for HCV. Arbutus is following a similar pathway by developing multiple therapeutic agents to achieve a cure for chronic HBV," said Dr. Sofia. "We are pleased to be presenting more encouraging data from our preclinical drug combination studies that support the utility of our proprietary HBV candidates in combination with the current standard of care. We continue to employ a range of HBV models to examine the potential use and mechanistic complementarity of our HBV agents in these combination regimens. Arbutus has built a robust pipeline of HBV product candidates to support this strategy."

### **About Arbutus**

Arbutus Biopharma Corporation is a biopharmaceutical company dedicated to discovering, developing and commercializing a cure for patients suffering from chronic HBV infection. Arbutus is headquartered in Vancouver, BC, and has facilities in Warminster, PA. 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 the potential of Arbutus' therapeutic candidates to impair HBV viral functions; targeting STING in chronic HBV infection contributing to viral control and complementing the immune modulatory programs underway at Arbutus; nominating a 2nd generation capsid assembly development candidate this year; and discovering, developing and commercializing a cure for patients suffering from chronic HBV infection.

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 clinical trials, and the usefulness of the data; 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.

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 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; Arbutus may not receive the necessary regulatory approvals for the clinical development of Arbutus' products; economic and market conditions may worsen; and market shifts may require a change in strategic focus.

A more complete discussion of the risks and uncertainties facing Arbutus appears in Arbutus' Annual Report on Form 10-K and Arbutus' continuous disclosure filings, which are available at <a href="https://www.sec.gov">www.sec.gov</a>. 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.

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