UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): November 7, 2023

Arbutus Biopharma Corporation

(Exact name of registrant as specified in its charter)

British Columbia, Canada	**001-34949**	**98-0597776**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

701 Veterans Circle
Warminster, Pennsylvania 18974
(Address of Principal Executive Offices) (Zip Code)

(267) 469-0914
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares, without par value	ABUS	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02. Results of Operations and Financial Condition.

On November 7, 2023, Arbutus Biopharma Corporation (the "Company") issued a press release announcing its financial results for the third quarter ended September 30, 2023 and certain other information. A copy of the press release is furnished as Exhibit 99.1 hereto and is incorporated by reference herein.

Item 8.01. Other Events.

On November 7, 2023, the Company posted an updated corporate presentation on its website at www.arbutusbio.com. A copy of the presentation is filed herewith as Exhibit 99.2 and is incorporated by reference herein.

On November 6, 2023, the Company reduced its workforce by 24% primarily affecting its research function. As a result, the Company will incur a one-time restructuring charge of approximately $1.1 million that will be recorded in the fourth quarter of 2023. The Company remains committed to continuing discovery research in chronic HBV.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	Press release dated November 7, 2023
99.2	Corporate Presentation dated November 7, 2023
104	Cover page interactive data file (formatted as inline XBRL).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Arbutus Biopharma Corporation

Date: November 7, 2023

By: /s/ David C. Hastings
David C. Hastings
Chief Financial Officer

EXHIBIT 99.1

Arbutus Reports Third Quarter 2023 Financial Results and Provides Corporate Update

Multiple data presentations upcoming at AASLD – The Liver Meeting®, including preliminary data from Phase 2a clinical trial combining imdusiran, our RNAi therapeutic, with VTP-300, an HBV antigen-specific immunotherapy

Dosing continues in two Phase 2a combination clinical trials with imdusiran and in a Phase 1a/1b clinical trial with AB-101, our oral PD-L1 checkpoint inhibitor

Reducing workforce by 24% as a result of recent pipeline optimization

Cash runway extended into first quarter 2026

Conference Call and Webcast Today at 8:45 AM ET

WARMINSTER, Pa., Nov. 07, 2023 (GLOBE NEWSWIRE) -- Arbutus Biopharma Corporation (Nasdaq: ABUS) ("Arbutus" or the "Company"), a clinical-stage biopharmaceutical company leveraging its extensive virology expertise to develop a cure for people with chronic hepatitis B virus (cHBV) infection, today reported third quarter 2023 financial results and provided a corporate update.

"We are looking forward to our upcoming data presentations at the American Association for the Study of Liver Diseases (AASLD) – The Liver Meeting® 2023, specifically the preliminary data from the Phase 2a clinical trial, AB-729-202, evaluating imdusiran, our RNAi therapeutic, in combination with VTP-300 and a nucleos(t)ide analogue in patients with chronic hepatitis B virus," said William Collier, President and Chief Executive Officer of Arbutus Biopharma. "These data have the potential to support our hypothesis that a functional cure for cHBV can be achieved by reducing surface antigen, suppressing HBV DNA and boosting the immune system. We continue to explore imdusiran as a cornerstone therapy as we dose patients in the additional treatment arm of the AB-729-202 trial that adds a low dose of nivolumab (Opdivo®), an anti-PD-1 monoclonal antibody, to the triple combination, as well as continuing to dose and follow patients in the on-going AB-729-201 clinical trial combining imdusiran with short durations of Peg-IFNα-2a and ongoing NA therapy. In addition, we have dosed our first group of healthy subjects in our Phase 1a/1b clinical trial with AB-101 and are on-track to report data from the first part of this trial in the first half of 2024. We look forward to sharing additional updates on our progress in the coming months."

Mr. Collier, continued, "Following our recent pipeline optimization, we made the difficult decision to reduce our workforce as we continue to manage our operating expenses. I'd like to thank our departing employees for their dedication and valuable contributions towards our mission. The Company remains committed to continuing discovery research in chronic HBV."

Pipeline Updates and Key Milestones

Imdusiran (AB-729, RNAi Therapeutic)

- Arbutus will be presenting preliminary data at AASLD from the first group of patients in its Phase 2a clinical trial (AB-729-202) that is evaluating imdusiran, nucleos(t)ide analogue (NA) therapy and Barinthus Bio's (formerly Vaccitech plc) VTP-300, an HBV antigen-specific immunotherapy.

  Enrollment is ongoing in the expanded cohort of the AB-729-202 clinical trial that is designed to enroll 20 patients who will receive imdusiran (60mg every 8 weeks) plus NA therapy for 24 weeks followed by VTP-300 plus up to two doses of low-dose nivolumab. Preliminary data from this additional treatment arm are expected in 2024.

- Follow-up is continuing in the Company's on-going Phase 2a clinical trial (AB-729-201), evaluating the safety, tolerability and antiviral activity of the combination of imdusiran and pegylated interferon alfa-2a (IFN) in patients with cHBV. Preliminary data presented at the EASL Congress in June 2023 suggest that the addition of IFN to imdusiran was generally well tolerated and appears to result in continued HBsAg declines in some patients. Arbutus plans to provide updates from this clinical trial in 2024.

AB-101 (Oral PD-L1 Inhibitor)

- In September, the Company dosed the first subject in its Phase 1a/1b double-blind, randomized, placebo-controlled, clinical trial (AB-101-001) designed to investigate the safety, tolerability, pharmacokinetics (PK), and pharmacodynamics (PD) of single and multiple oral doses of AB-101 for up to 28 days in healthy subjects and patients with cHBV. The trial will be conducted in three parts starting with single ascending doses in healthy subjects, followed by multiple ascending doses in healthy subjects and culminating with multiple doses in patients with cHBV. Safety and PK/PD assessments will be performed prior to dose escalation in all trial parts. Initial data from part one of the trial are expected in the first half of 2024.

Corporate Updates

In connection with the Company's decision in September to focus its pipeline on its HBV clinical stage compounds and discontinue its research programs, Arbutus has taken steps to streamline its organization and has reduced its workforce by 24%, effective November 6, 2023, primarily affecting its research function. As a result, Arbutus will incur a one-time restructuring charge of approximately $1.1 million that will be recorded in the fourth quarter of 2023.

With the organizational changes announced today and its ongoing cost management efforts, the Company now expects its current cash, cash equivalents and investments will be sufficient to fund its operations into the first quarter of 2026. The Company remains committed to continuing discovery research in chronic HBV.

In a separate press release issued today, Arbutus announced that William Collier will be retiring as President and CEO, as well as a member of the Company's Board of Directors, at the end of 2023 and Michael J. McElhaugh, Arbutus Co-founder and COO, will serve as interim CEO and will join the Company's Board of Directors.

The above corporate updates do not affect the Company's pending litigations. Arbutus will continue to protect and defend its intellectual property, which is the subject of the on-going lawsuits against Moderna and Pfizer/BioNTech. The Company is seeking fair compensation for Moderna's and Pfizer/BioNTech's use of its patented LNP technology that was developed with great effort and at a great expense, without which Moderna and Pfizer/BioNTech's COVID-19 vaccines would not have been successful. Document production is currently on-going in the lawsuit against Moderna with the claim construction hearing scheduled for February 7, 2024. Document and written discovery in the lawsuit against Pfizer/BioNTech is ongoing and a date for a claim construction hearing has not been set.

Financial Results

Cash, Cash Equivalents and Investments

As of September 30, 2023, we had cash, cash equivalents and investments in marketable securities of $144.7 million compared to $184.3 million as of December 31, 2022. During the nine months ended September 30, 2023, we used $68.6 million in operating activities, which was partially offset by $26.0 million of net proceeds from the issuance of common shares under our "at-the-market" offering program. We expect our 2023 net cash burn to range from between $90 to $95 million, excluding any proceeds received from our "at the market program". We believe our cash runway will be sufficient to fund our operations into the first quarter of 2026.

Revenue

Total revenue was $4.7 million for the three months ended September 30, 2023, compared to $6.0 million for the same period in 2022. The decrease of $1.3 million was due primarily to a decrease in royalty revenue because of a decrease in Alnylam's sales of ONPATTRO.

Operating Expenses

Research and development expenses were $20.2 million for the three months ended September 30, 2023 compared to $20.1 million for the same period in 2022. A decrease in expenses for drug supply manufacturing for our imdusiran Phase 2a clinical trials and expenses for our AB-836 Phase 1a/1b clinical trial, which was discontinued in the fourth quarter of 2022, were offset by an increase in expenses for our ongoing AB-101 clinical trial and our coronavirus program, which was discontinued in the third quarter of 2023. General and administrative expenses were $5.8 million for the three months ended September 30, 2023, compared to $3.5 million for the same period in 2022. This increase was due primarily to increases in employee-related costs, including non-cash stock-based compensation expense, and professional fees.

Net Loss

For the three months ended September 30, 2023, our net loss was $20.1 million, or a loss of $0.12 per basic and diluted common share, as compared to a net loss of $17.6 million, or a loss of $0.12 per basic and diluted common share, for the three months ended September 30, 2022.

Outstanding Shares

As of September 30, 2023, we had approximately 167.7 million common shares issued and outstanding, as well as approximately 21.0 million stock options and unvested restricted stock units outstanding. Roivant Sciences Ltd. owned approximately 23% of our outstanding common shares as of September 30, 2023.

UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF LOSS
(in thousands, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenue				
Collaborations and licenses	$ 3,935	$ 3,607	$ 13,329	$ 27,381
Non-cash royalty revenue	723	2,345	2,667	5,393
Total revenue	**4,658**	**5,952**	**15,996**	**32,774**
Operating expenses				
Research and development	20,169	20,055	56,136	61,459
General and administrative	5,842	3,493	17,374	13,585
Change in fair value of contingent consideration	205	215	(158)	624
Total operating expenses	**26,216**	**23,763**	**73,352**	**75,668**
Loss from operations	(21,558)	(17,811)	(57,356)	(42,894)
Other income (loss)				
Interest income	1,494	694	4,223	1,249
Interest expense	(46)	(429)	(415)	(1,417)
Foreign exchange gain	6	(21)	11	(18)
Total other income (loss)	1,454	244	3,819	(186)
Loss before income taxes	(20,104)	(17,567)	(53,537)	(43,080)
Income tax expense	—	—	—	(4,444)
Net loss	**$ (20,104)**	**$ (17,567)**	**$ (53,537)**	**$ (47,524)**
Net loss per common share				
Basic and diluted	$ (0.12)	$ (0.12)	$ (0.32)	$ (0.32)
Weighted average number of common shares				

Basic and diluted	167,512,708	150,995,191	165,085,243	149,385,999

UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands)

	September 30, 2023	December 31, 2022
Cash, cash equivalents and marketable securities, current	$ 134,180	$ 146,913
Accounts receivable and other current assets	7,427	4,226
Total current assets	141,607	151,139
Property and equipment, net of accumulated depreciation	5,033	5,070
Investments in marketable securities, non-current	10,496	37,363
Right of use asset	1,502	1,744
Other non-current assets	3	103
Total assets	**$ 158,641**	**$ 195,419**
Accounts payable and accrued liabilities	$ 9,806	$ 16,029
Deferred license revenue, current	12,106	16,456
Lease liability, current	412	372
Total current liabilities	22,324	32,857
Liability related to sale of future royalties	8,110	10,365
Deferred license revenue, non-current	—	5,999
Contingent consideration	7,373	7,531
Lease liability, non-current	1,497	1,815
Total stockholders' equity	119,337	136,852
Total liabilities and stockholders' equity	**$ 158,641**	**$ 195,419**

UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Nine Months Ended September 30,	
	2023	2022
Net loss	$ (53,537)	$ (47,524)
Non-cash items	4,613	3,429
Change in deferred license revenue	(10,349)	25,463
Other changes in working capital	(9,371)	266
Net cash (used in) operating activities	**(68,644)**	**(18,366)**
Net cash provided by (used in) investing activities	28,548	(87,624)
Issuance of common shares pursuant to Share Purchase Agreement	—	10,973
Issuance of common shares pursuant to the Open Market Sale Agreement	26,000	9,241
Cash provided by other financing activities	840	516
Net cash provided by financing activities	26,840	20,730
Effect of foreign exchange rate changes on cash and cash equivalents	11	(18)
Decrease in cash and cash equivalents	(13,245)	(85,278)
Cash and cash equivalents, beginning of period	30,776	109,282
Cash and cash equivalents, end of period	17,531	24,004
Investments in marketable securities	127,145	166,150
Cash, cash equivalents and marketable securities, end of period	**$ 144,676**	**$ 190,154**

Conference Call and Webcast Today

Arbutus will hold a conference call and webcast today, Tuesday, November 7, 2023, at 8:45 AM Eastern Time to provide a corporate update. To dial-in for the conference call by phone, please register using the following link: Registration Link. A live webcast of the conference call can be accessed through the Investors section of Arbutus' website at www.arbutusbio.com.

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

About imdusiran (AB-729)

Imdusiran is an RNA interference (RNAi) therapeutic specifically designed to reduce all HBV viral proteins and antigens including hepatitis B surface antigen, which is thought to be a key prerequisite to enable reawakening of a patient's immune system to respond to the virus.

Imdusiran targets hepatocytes using Arbutus' novel covalently conjugated N-Acetylgalactosamine (GalNAc) delivery technology enabling subcutaneous delivery. Clinical data generated thus far has shown single and multiple doses of imdusiran to be generally safe and well-tolerated, while also providing meaningful reductions in hepatitis B surface antigen and hepatitis B DNA. Imdusiran is currently in multiple Phase 2a clinical trials.

About AB-101

AB-101 is our oral PD-L1 inhibitor candidate that we believe will allow for controlled checkpoint blockade while minimizing the systemic safety issues typically seen with checkpoint antibody therapies. Immune checkpoints such as PD-1/PD-L1 play an important role in the induction and maintenance of immune tolerance and in T-cell activation. Preclinical data generated thus far indicates that AB-101 mediates re-activation of exhausted HBV-specific T-cells from cHBV patients. We believe AB-101, when used in combination with other approved and investigational agents, could potentially lead to a functional cure in patients chronically infected with HBV. AB-101 is currently being evaluated in a Phase 1a/1b clinical trial. We have identified compounds in our internal PD-L1 portfolio that could also be used in oncology indications.

About HBV

Hepatitis B is a potentially life-threatening liver infection caused by the hepatitis B virus (HBV). HBV can cause chronic infection which leads to a higher risk of death from cirrhosis and liver cancer. Chronic HBV infection represents a significant unmet medical need. The World Health Organization estimates that over 290 million people worldwide suffer from chronic HBV infection, while other estimates indicate that approximately 2.4 million people in the United States suffer from chronic HBV infection. Approximately 820,000 people die every year from complications related to chronic HBV infection despite the availability of effective vaccines and current treatment options.

About Arbutus

Arbutus Biopharma Corporation (Nasdaq: ABUS) is a clinical-stage biopharmaceutical company leveraging its extensive virology expertise to identify and develop novel therapeutics with distinct mechanisms of action, which can be combined to provide a functional cure for patients with chronic hepatitis B virus (cHBV). We believe the key to success in developing a functional cure involves suppressing HBV DNA, reducing surface antigen, and boosting HBV-specific immune responses. Our pipeline of internally developed, proprietary compounds includes an RNAi therapeutic, imdusiran (AB-729) and an oral PD-L1 inhibitor, AB-101. Imdusiran has generated meaningful clinical data demonstrating an impact on both surface antigen reduction and reawakening of the HBV-specific immune response. Imdusiran is currently in two Phase 2a combination clinical trials. AB-101 is currently being evaluated in a Phase 1a/1b clinical trial. Additionally, we have identified compounds in our internal PD-L1 portfolio that could also be used in oncology indications. 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 future development plans for our product candidates; our program updates; our belief that checkpoint inhibitors may play a key role in antiviral immune tolerance in cHBV; the expected cost, timing and results of our clinical development plans and clinical trials with respect to our product candidates; our expectations with respect to clinical trial design and the release of data from our clinical trials and the expected timing thereof; our expectations and goals for our collaborations with third parties and any potential benefits related thereto; the potential for our product candidates to achieve success in clinical trials; our expected financial condition, including the anticipated duration of cash runways and timing regarding needs for additional capital and our expected management changes.

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 patent litigation matters.

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: the risk that the program updates may not materially extend the cash runway and may create a distraction or uncertainty that may adversely affect our operating results, business, or investor perceptions; 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 product candidate; Arbutus may elect to change its 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; uncertainties associated with litigation generally and patent litigation specifically; it may take considerable time and expense to resolve the clinical hold that has been placed on AB-101 by the FDA, and no assurance can be given that the FDA will remove the clinical hold; Arbutus and its collaborators may never realize the expected benefits of the collaborations; and market shifts may require a change in strategic focus; and risks related to the sufficiency of Arbutus' cash resources and its ability to obtain adequate financing in the future for its foreseeable and unforeseeable operating expenses and capital expenditures.

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

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Arbutus BIOPHARMA

Corporate Presentation

NASDAQ: ABUS

www.arbutusbio.com

November 7, 2023

Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and Canadian securities laws. All statements that are not historical facts are hereby identified as forward-looking statements for this purpose and include, among others, statements relating to: the potential market opportunity for HBV; Arbutus' ability to meet a significant unmet medical need; the sufficiency of Arbutus' cash and cash equivalents for the anticipated durations; the expected cost, timing and results of Arbutus' clinical development plans and clinical trials, including its clinical collaborations with third parties; the potential for Arbutus' product candidates to achieve their desired or anticipated outcomes; Arbutus' expectations regarding the timing and clinical development of Arbutus' product candidates, including its articulated clinical objectives; the timeline to a combination cure for HBV; Arbutus' expectations regarding its technology licensed to third parties; the expected timing and payments associated with strategic and/or licensing agreements; the patent infringement lawsuits; and other statements relating to Arbutus' future operations, future financial performance, future financial condition, prospects or other future events.

With respect to the forward-looking statements contained in this presentation, Arbutus has made numerous assumptions regarding, among other things: the timely receipt of expected payments; the effectiveness and timeliness of pre-clinical 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 patent litigation matters. Forward-looking statements herein involve known and unknown risks, uncertainties and other factors that may cause the actual results, events or developments to be materially different from any future results, events or developments expressed or implied by such forward-looking statements. Such factors include, among others: anticipated pre-clinical 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; uncertainties associated with litigation generally and patent litigation specifically; market shifts may require a change in strategic focus; and the parties may never realize the expected benefits of the collaborations. A more complete discussion of the risks and uncertainties facing Arbutus appears in Arbutus' Annual Report on Form 10-K, Quarterly Report on Form 10-Q and Arbutus' periodic disclosure filings, which are available at www.sec.gov and at www.sedar.com. 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.

Our Strategy for Value Creation

Leverage the proven track record of success established with our team's expertise in understanding and treating viral infections by discovering and developing a differentiated pipeline of therapies targeting chronic HBV.

Develop a **combination therapy that includes antivirals and immunologics** to provide a finite duration treatment for people with cHBV that results in >20% functional cure rate.

Arbutus BIOPHARMA

HBV: Hepatitis B Virus | **cHBV:** chronic HBV

Investment Highlights

Indications with significant unmet medical need & large market opportunities	**Team with virology expertise and proven track record**	**Portfolio of internally discovered assets with distinct MOAs**	**Lead HBV compound – imdusiran (AB-729) RNAi therapeutic in multiple Phase 2a combination clinical trials**	**Strong financial position**	**Patented LNP technology**
Focused on developing a functional cure for HBV	Discovered, developed & commercialized multiple drugs	RNAi therapeutic PD-L1 inhibitor	Data shows imdusiran is generally safe and well-tolerated and has shown meaningful suppression of HBsAg while on- or off-treatment	Cash runway into Q1 2026	Receiving licensing royalties arising from Alnylam's Onpattro® and seeking damages for Moderna & Pfizer/BioNTech COVID-19 vaccine sales

Arbutus BIOPHARMA

MOA: Mechanism of Action | **PD-L1:** Programmed death-ligand 1 | **HBsAg:** Hepatitis B surface antigen

Pipeline

Arbutus BIOPHARMA

NA: Nucleoside Analogue

HBV Overview

Cause & Symptoms

- Life-threatening liver infection caused by hepatitis B virus (HBV)
- Transmitted through body fluids and from mother to child
- Long-term chronic infection (cHBV) leads to higher risk of cirrhosis and/or liver cancer

Diagnosis

- HBsAg detection
- Additional biomarkers necessary to determine stage of disease

Treatments

- NA therapy – lifelong daily therapy, aimed at reducing HBV DNA and risk of cirrhosis and/or HCC
- Peg-IFNα – administered weekly; poorly tolerated
- <5% of patients achieve functional cure

Rationale

- Need for finite and more efficacious HBV treatments that further improve long-term outcomes and increase functional cure rate
- Combination therapy with different MOAs will be required to reduce HBsAg, suppress HBV DNA, and boost immune system

Sources for all data on slide:

1 Hepatitis B Fact Sheet, WHO https://www.who.int/news-room/fact-sheets/detail/hepatitis-b ; Hep B Foundation link https://www.hepb.org/what-is-hepatitis-b/what-is-hepb/facts-and-figures/ ; Kowdley et al. Hepatology (2012) Prevalence of Chronic Hepatitis B Among Foreign-Born Persons Living in the US by Country of Origin

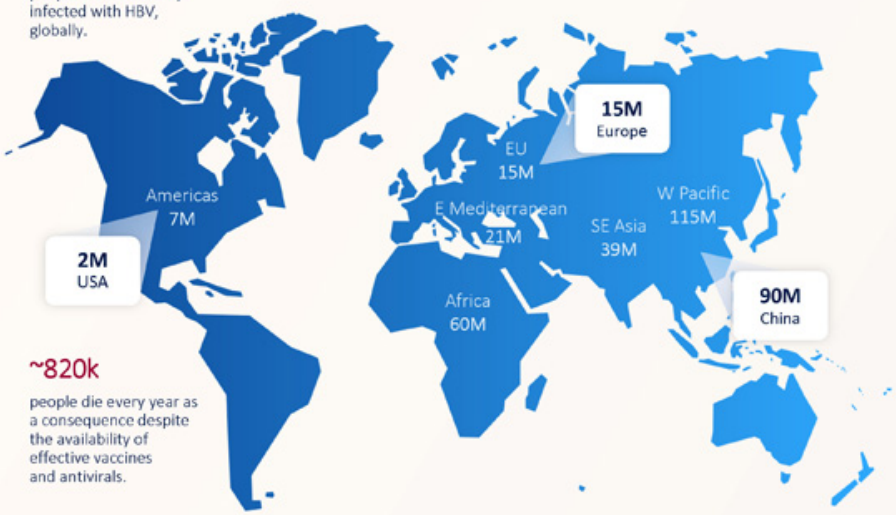
2 Pegasys, PEG-Intron, Baraclude and Viread Package Inserts

Arbutus BIOPHARMA

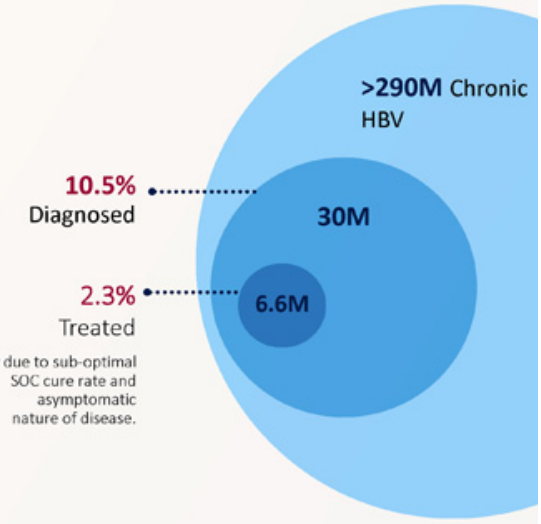
HBsAg: HBV Surface Antigen | **HCC:** Hepatocellular carcinoma

HBV Presents a Significant Unmet Medical Need

>290M
people are chronically infected with HBV, globally.



~820k
people die every year as a consequence despite the availability of effective vaccines and antivirals.



Low due to sub-optimal SOC cure rate and asymptomatic nature of disease.

Arbutus BIOPHARMA

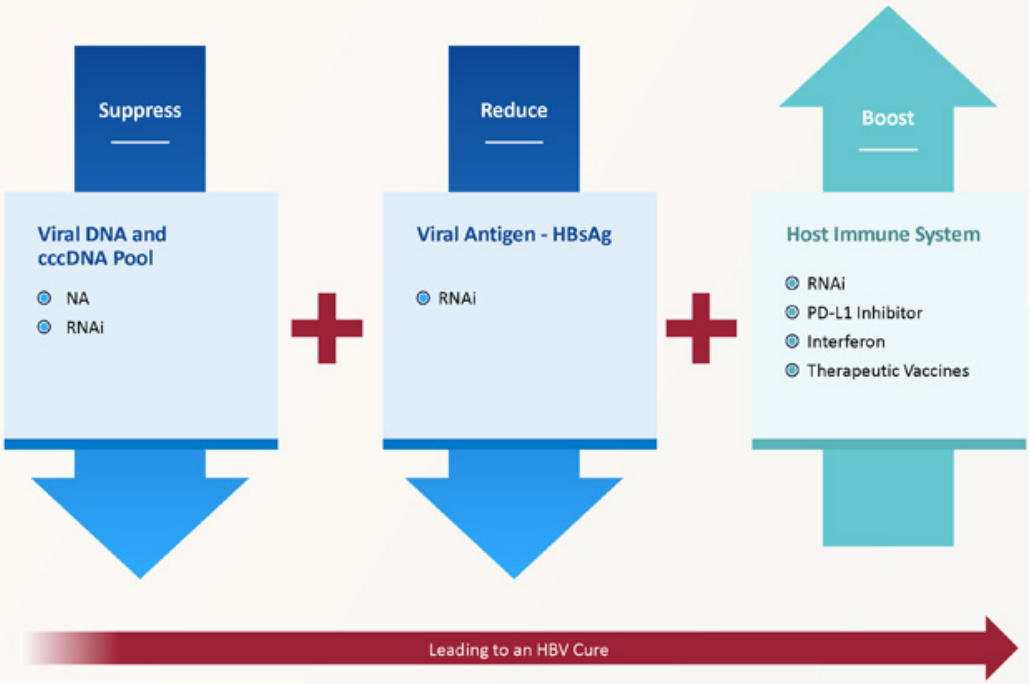
SOC: Standard of Care

Sources: https://www.who.int/news-room/fact-sheets/detail/hepatitis-b
https://www.hepb.org/what-is-hepatitis-b/what-is-hepb/facts-and-figures/

3-Pronged Approach to Therapeutic Success

- **Suppress** HBV DNA
- **Reduce** viral antigens
- **Boost** host immune response

Therapeutic success will **require a combination of agents** with complementary MOAs.



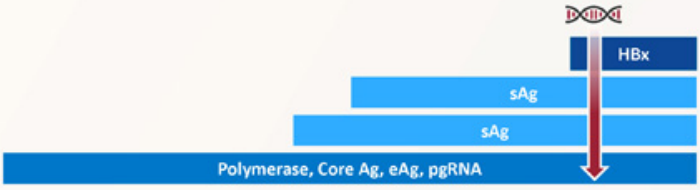

RNAi Therapeutic
Arbutus
BIOPHARMA
9

Imdusiran

RNAi Therapeutic

Proprietary GalNAc-conjugate delivery technology provides liver targeting and enables **subcutaneous dosing**

- Single trigger RNAi agent targeting all HBV transcripts
- Inhibits HBV replication and lowers all HBV antigens
- Pan-genotypic activity across HBV genotypes
- Demonstrated complementarity with other agents
- Actively targets the liver
- Active against cccDNA derived and integrated HBsAg transcripts
- Clean profile in long term preclinical safety studies



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AB-729-001: Phase 1a/1b Clinical Trial with Imdusiran

Part 1 & 2:

Single-ascending dose

Imdusiran monotherapy conclusions:

- Robust HBsAg declines across all cohorts
- HBV DNA declines in HBV DNA+ patients

Part 3: Multiple Ascending Dose in cHBV Patients

- **E: 60mg Q4W HBV DNA-**
- **F: 60mg Q8W HBV DNA-**
- **G: 90mg Q8W + TDF HBV DNA+**
- **I: 90mg Q8W HBV DNA-**
- **J: 90mg Q12W HBV DNA-**
- **K: 90mg Q8W HBV DNA-, HBeAg+ only**

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HBeAg: HBV E antigen | **TDF:** tenofovir disoproxil fumarate

Data presented at EASL 2022

AB-729-001: Robust HBsAg Declines Irrespective of Imdusiran Dose, Dosing Schedule, HBeAg or HBV DNA Status

Mean (SE) Baseline and Δ log_{10} HBsAg by Visit

Visit	HBV DNA-					HBV DNA+
	Cohort E (N=7)	Cohort F (N=7)	Cohort I (N=6)	Cohort J (N=7)	Cohort K (N=7)	Cohort G (N=7)
Baseline	3.51 (0.20)	3.53 (0.17)	3.36 (0.23)	3.37 (0.28)	3.23 (0.14)	3.14 (0.14)
Treatment Week 12	-1.10 (0.15)	-1.02 (0.11)	-1.30 (0.19)	-1.06 (0.31)	-1.63 (0.39)	-1.56 (0.32)
Treatment Week 24	-1.84 (0.16)	-1.57 (0.09)	-1.79 (0.22)	-1.56 (0.25)	-1.99 (0.35)	-1.82 (0.29)
Treatment Week 48	-1.89 (0.18)	-1.90 (0.14)	-1.91 (0.32)	-1.80 (0.41)	-2.57 (0.61)	-2.05 (0.31)
Follow Up Week 12	-1.74 (0.20)	-1.59 (0.23)	-1.42 (0.26)	-1.52 (0.40)	-2.38 (0.75)	-1.50 (0.13)
Follow Up Week 24	-1.43 (0.18)	-1.26 (0.21)	-1.37 (0.39)	-1.49 (0.35)	-1.82 (0.63)	-1.53 (0.29)
Follow Up Week 48	-1.55 (0.56)	-1.01 (0.24)	-0.88 (0.33)	-1.04 (0.20)	-1.86 (0.70)	-1.10 (0.27)

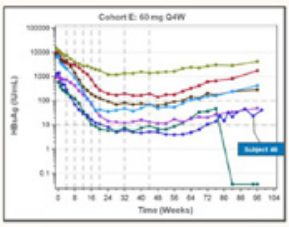
Data shown as mean (SE) log_{10} IU/mL; minimum of 5 subjects/timepoint. Last imdusiran (AB-729) dose Cohort E: Week 44, Cohorts F, I, G, K: Week 40, Cohort J: Week 36; HBsAg Assay LLOQ = 0.07 IU/mL; *N=6; †N=5

- All Cohorts achieved at least a -1.8 log_{10} decline in mean HBsAg at the end of the treatment period (Week 48)
- Mean HBsAg levels remained below baseline values at Follow Up Week 48
- There were no significant differences in mean HBsAg declines between the 60 mg and 90 mg doses or between different dosing intervals

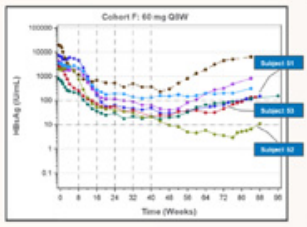
AB-729-001: Robust & Sustained HBsAg Declines While On- or Off-Treatment with Imdusiran

Change in HBsAg vs time

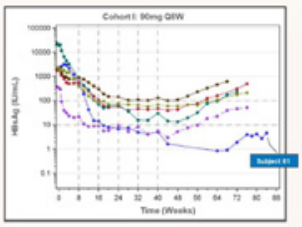
Cohort E



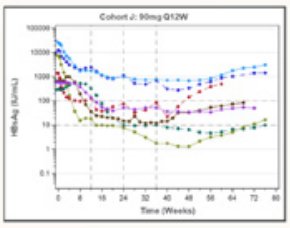
Cohort F



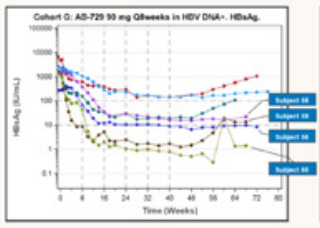
Cohort I



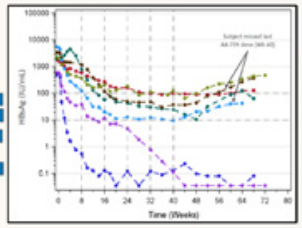
Cohort J



Cohort G



Cohort K



- 33 of 41 patients had HBsAg < 100 IU/mL at some point during the trial
- 1 patient in Cohort E (baseline HBsAg = 583.5 IU/mL) who qualified but declined to participate in NA discontinuation seroconverted at Week 84 (HBsAg < LLOQ and HBsAb = 189 IU/mL at last visit); liver enzymes remained within normal limits.
- 2 patients in Cohort K reached HBsAg<LLOQ on multiple visits with detectable HBsAb levels

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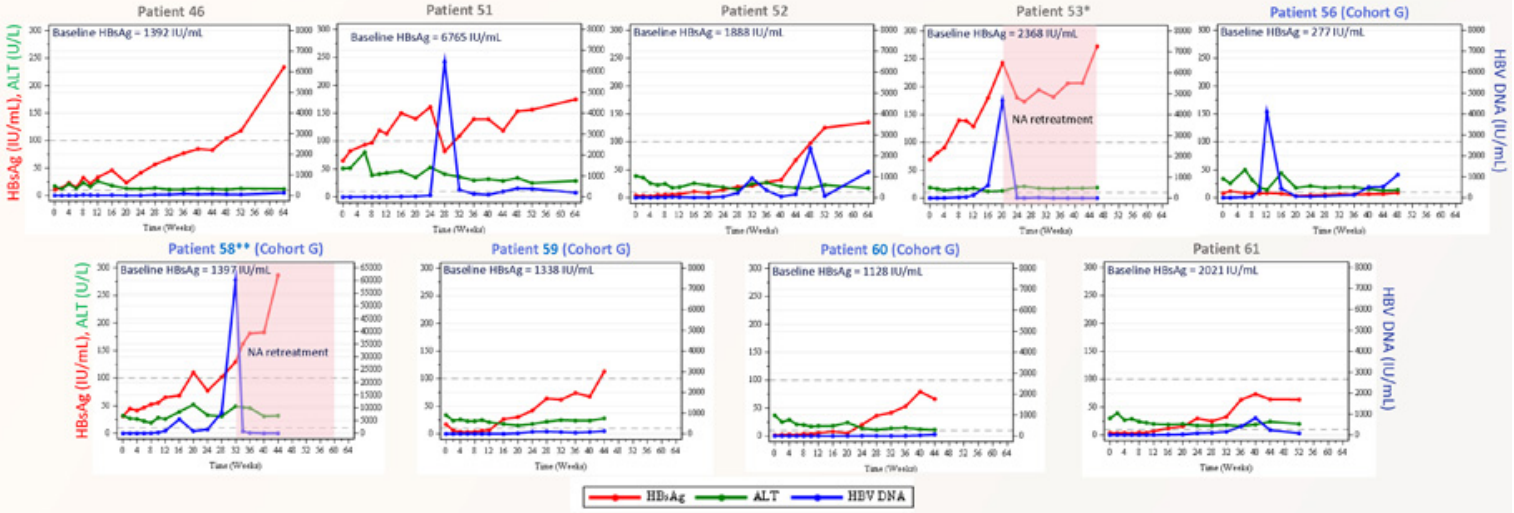
Data presented at EASL 2022 and AASLD 2022

AB-729-001: Imdusiran Shows Low Levels of HBV Biomarkers Persisting in cHBV Patients While Off-Treatment



- 7 of 9 (78%) subjects remain off NA therapy for 44-64 weeks and all completed imdusiran treatment over 1½ years ago
- Most subjects have maintained low HBV DNA levels off treatment
- HBsAg remains between -0.8 and -1.6 $\log_{10}$ IU/mL below baseline values
- NA discontinuation post-imdusiran treatment appears well tolerated with no ALT flares

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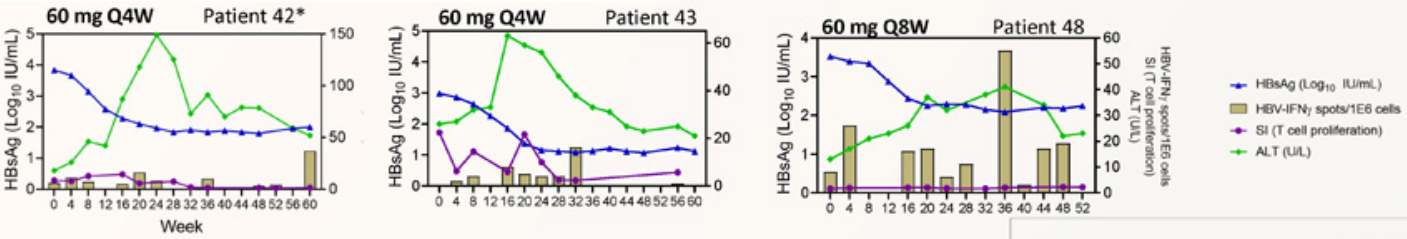
Data presented at GHS 2023

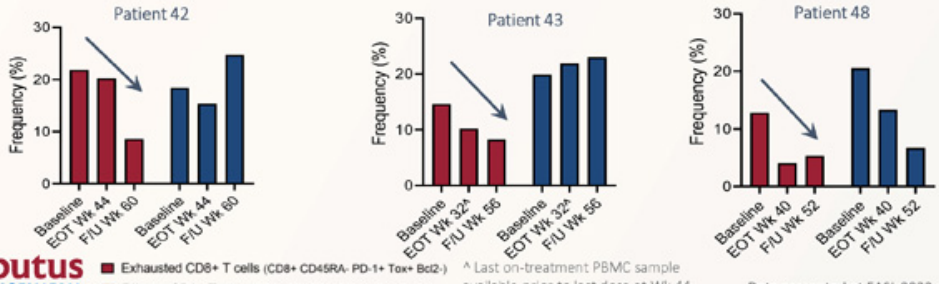
* Patient 53 restarted NA therapy at Investigator's request after the NA d/c FU W20 visit (pink shaded area).
** Patient 58 restarted therapy after the NA d/c FU W36 visit (pink shaded area).

AB-729-001: Treatment with Imdusiran Reactivates HBV Specific Immunity in Some Patients

Imdusiran Increased HBV-Specific T-Cell Activation



Imdusiran Decreased Exhausted T-Cells



^ Last on-treatment PBMC sample available prior to last dose at Wk 44

- Upregulation of HBV-specific T-cell activation markers observed in all 7 patients assessed to date
- Two profiles of HBV-specific T cell IFN-γ responses observed
  - Elevation between Wk 16-28 which coincides with nadir of HBsAg reduction
  - *Elevation after imdusiran dosing completed, between Wk 48-60

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Data presented at EASL 2022

AB-729-001 Safety Summary

- Imdusiran is generally safe and well-tolerated after repeat dosing for up to 48 weeks
- No treatment-related SAEs or discontinuations due to AEs
- No treatment-related Grade 3 or 4 AEs
- No treatment-related Grade 3 or 4 laboratory abnormalities
  - Grade 1 and Grade 2 ALT elevations have improved or stabilized with continued treatment
- Injection site AEs were all Grade 1 (erythema, pain, bruising)
- No clinically meaningful changes in ECGs or vital signs
- After NA treatment discontinuation, no ALT flares have been observed

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SAE: Serious Adverse Event | AE: Adverse Event

AB-729-001 Clinical Trial Key Takeaways

Imdusiran provided robust and comparable HBsAg declines regardless of dose, dosing interval, HBeAg or DNA status

Discontinuation of both imdusiran and NA-therapy results in sustained reduction in HBsAg and HBV DNA in 7 of 9 patients

Imdusiran results in HBV-specific T-cell immune restoration and decrease of exhausted T-cells in some patients

Imdusiran was generally safe and well-tolerated after completing dosing in 41 patients

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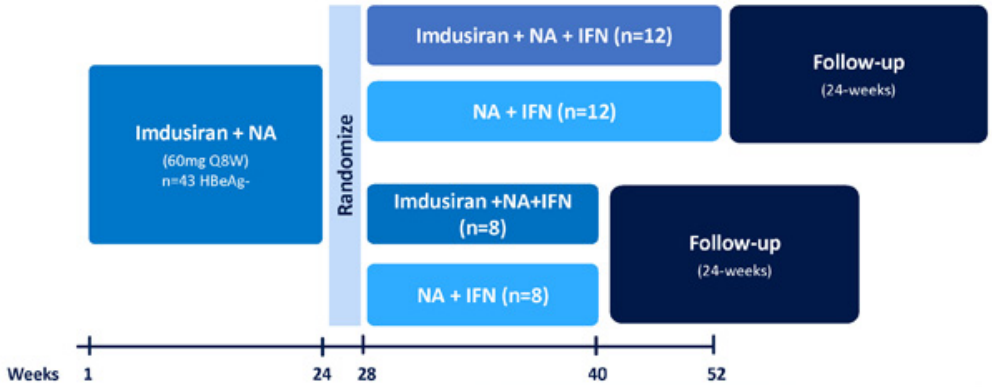
* Data previously presented

AB-729-201:

Phase 2a POC Clinical Trial

Imdusiran in combination with **ongoing NA therapy and short courses of Peg-IFNα-2a in cHBV patients**



Multi-center, open-label Phase 2a

Primary objective: evaluate safety and tolerability of imdusiran in combination with Peg-IFNa-2a in patients with NA-suppressed cHBV

Preliminary results*: treatment was generally well tolerated with continued HBsAg declines in some patients during the IFN treatment period

- Mean HBsAg decline during lead-in phase was 1.6 $\log_{10}$ at week 24 of treatment
- 93% of patients (38 of 41 randomized) had HBsAg levels <100 IU/mL during treatment period
- 4 patients reached HBsAg levels <LLOQ during IFN treatment

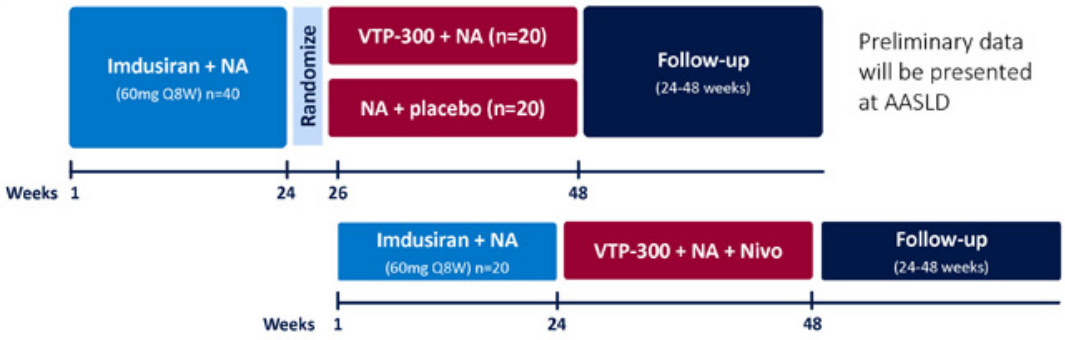
After 24-weeks of follow-up, patients are assessed to stop NA therapy. Those patients that stop NA therapy will be followed for an additional 48 weeks.

POC: Proof of Concept
*Data presented at EASL 2023

AB-729-202:

Phase 2a POC Clinical Trial

POC Phase 2a clinical trial evaluating imdusiran in combination with Barinthus' (formerly Vaccitech) immunotherapeutic, VTP-300, with or without low dose nivolumab, and a NA



Preliminary data will be presented at AASLD

Primary objective: evaluate safety and reactogenicity of imdusiran followed by VTP-300 or placebo

At Week 48 all participants who are eligible to discontinue NA therapy will be followed for an additional 48 weeks

Expanded the clinical trial to include an additional arm with nivolumab (Opdivo®), and dosed first patient in this arm in the first half of 2023

Full rights retained by the Companies of their respective product candidates and all costs split equally

Imdusiran

Strategic Collaboration

QILU PHARMACEUTICAL

Exclusive Licensing* and Strategic Partnership

Develop, manufacture and commercialize imdusiran in mainland China, Hong Kong, Macau and Taiwan

*ABUS retains the non-exclusive right to develop and manufacture in the Qilu territory for exploiting AB-729 in the rest of the world

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Deal economics for Arbutus:

$40M	Upfront payment (received in 2022)
$15M	Equity investment (received in 2022)
Up to $245M	Commercialization and milestone payments
Double-digit up to low twenties %	Tiered royalties on annual sales

Qilu Pharmaceutical:

One of the leading pharmaceutical companies in China, provides development, manufacturing, and commercialization expertise to this partnership


Oral PD-L1
Inhibitor
Arbutus
BIOPHARMA
21

AB-101: Oral PD-L1 Inhibitor for HBV Immune Reactivation

Rationale

- HBV immune tolerance is a critical driver of cHBV infection
- PD-1:PD-L1 checkpoint axis plays a key role in immune tolerization in cHBV
- PD-L1 expression upregulated during HBV infection
- PD-1 upregulated on HBV-specific T- and B-cells
- Inhibition associated with HBsAg loss in some cHBV patients

Small-Molecule Inhibitor Approach

- Allows controlled checkpoint blockade
- Enables oral dosing
- Designed to reduce systemic safety issues seen with Abs

AB-101

- Blocks PD-L1/PD-1 interaction at sub-nM concentrations
- Activates HBV-specific immune responses in T-cells from cHBV patients in vitro
- Novel MOA identified
- Demonstrates a robust checkpoint mediated *in vivo* effect
- Improves HBV-specific T- and B-cell responses *ex vivo*

Currently in a Phase 1a/1b clinical trial

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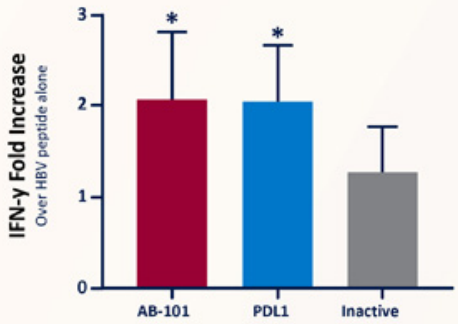
PD-1: Programmed death ligand protein | **Abs:** Antibodies

AB-101: Small-Molecule Oral PD-L1 Inhibitor for HBV

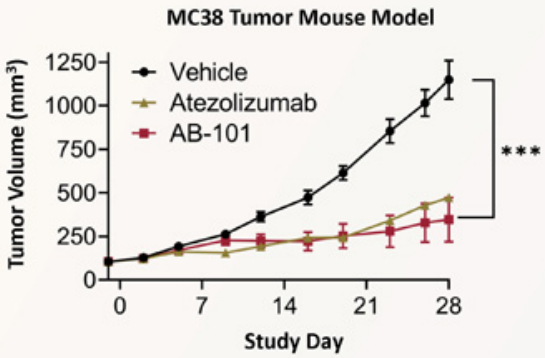
AB-101 is highly potent and activates HBV specific immune cells from chronic HBV patients

AB-101 reinvigorates HBV-specific cHBV patient T-cells



PBMCs
N= cells from 9 cHBV patients
*p<-0.05

Once daily oral administration of AB-101 resulted in profound tumor reduction



Data presented at EASL 2022

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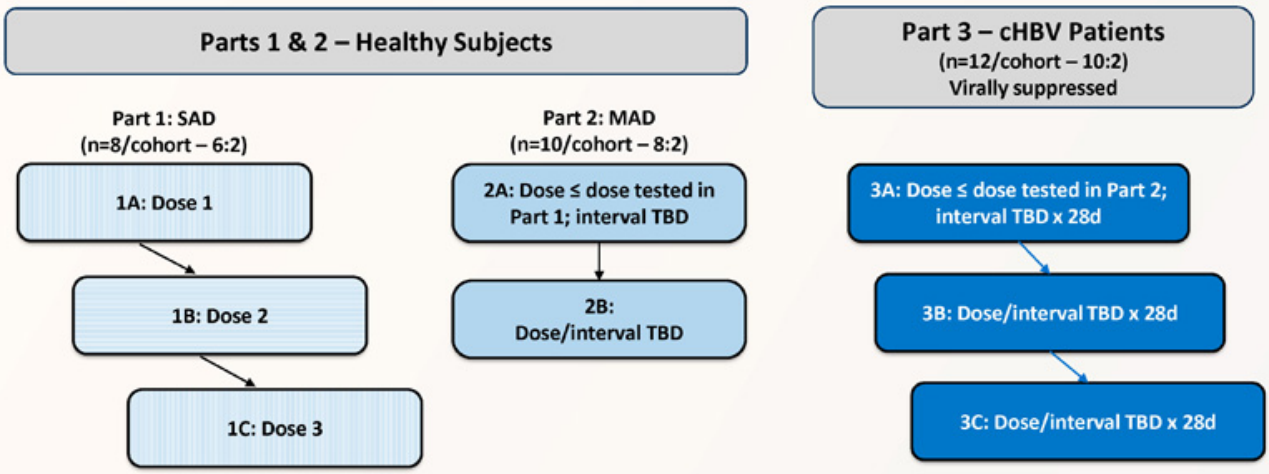
PBMC: Peripheral Blood Mononuclear Cells

AB-101-001: Phase 1a/1b Clinical Trial with AB-101



Additional optional dose panels may be used.

2023 Key Milestones

Cash balance* of $145M as of Sept 30, 2023, cash runway into Q1 2026; 2023 net cash burn of between $90M and $95M

Milestone	Anticipated Timing 2023
Imdusiran: Dose first patient in the imdusiran+VTP-300+Nivo arm of the ongoing Phase 2a Vaccitech trial	1H ✓
Imdusiran: Preliminary IFN data from patients in the AB-729-201 clinical trial	1H ✓
Imdusiran: Follow-up off-treatment data from AB-729-001 clinical trial	1H ✓
Imdusiran: Preliminary data from Phase 2a POC clinical trial with imdusiran+VTP-300+NA therapy	Q4
AB-101: Initiate single-ascending dose portion of Phase 1 clinical trial in healthy subjects	2H ✓

*Consists of cash, cash equivalents and marketable securities

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Thank You

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