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): September 11, 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 8.01. Other Events.

On September 11, 2023, Arbutus Biopharma Corporation ("Arbutus" or the "Company") issued a press release announcing pipeline updates including its continued focus on its hepatitis B virus (HBV) assets, imdusiran (AB-729) as a cornerstone therapy in a functional cure treatment regimen for patients with chronic hepatitis B virus (cHBV), as well as its oral PD-L1 inhibitor, AB-101. In addition, the Company is discontinuing development of its oral RNA destabilizer, AB-161, due to a pre-clinical toxicology finding not related to peripheral neuropathy. There were no safety issues reported in the healthy subjects that received single doses of AB-161 in the Phase 1 clinical trial. The company is also discontinuing its efforts to identify and develop a coronavirus combination therapy that included AB-343 its Mpro candidate, due to an unfavorable PK profile noted in the IND-enabling studies, and a potential nsp12 polymerase inhibitor. These pipeline changes are expected to extend the Company's cash runway through Q3 2025. A copy of the press release is filed herewith as Exhibit 99.1 and is incorporated by reference herein.

On September 11, 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.

Forward-Looking Statements and Information

This report 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 report include statements about the Company's program updates; and the Company's expected financial condition, including the anticipated duration of cash runways and timing regarding needs for additional capital.

With respect to the forward-looking statements contained in this report, 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 the Company's 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.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	Press Release dated September 11, 2023
99.2	Corporate Presentation dated September 11, 2023
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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: September 11, 2023

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

EXHIBIT 99.1

Arbutus Announces Pipeline Updates and Dosing of the First Subject in the Phase 1a/1b Clinical Trial with AB-101; Cash Runway Extended

Progressing development of hepatitis B virus (HBV) compounds imdusiran (AB-729) and AB-101, an oral PD-L1 inhibitor

Discontinuing all coronavirus and oral RNA destabilizer programs, including AB-343 and AB-161

Extending cash runway through Q3 2025

WARMINSTER, Pa., Sept. 11, 2023 (GLOBE NEWSWIRE) -- Arbutus Biopharma Corporation (Nasdaq: ABUS) ("Arbutus" or the "Company"), a clinical-stage biopharmaceutical company leveraging its extensive virology expertise to develop novel therapeutics that target specific viral diseases, today announced pipeline updates including its continued focus on its hepatitis B virus (HBV) assets, imdusiran (AB-729) as a cornerstone therapy in a functional cure treatment regimen for patients with chronic hepatitis B virus (cHBV), as well as its oral PD-L1 inhibitor, AB-101. In addition, the Company is discontinuing development of its oral RNA destabilizer, AB-161, due to a pre-clinical toxicology finding not related to peripheral neuropathy. There were no safety issues reported in the healthy subjects that received single doses of AB-161 in the Phase 1 clinical trial. The company is also discontinuing its efforts to identify and develop a coronavirus combination therapy that included AB-343 its M^{pro} candidate, due to an unfavorable PK profile noted in the IND-enabling studies, and a potential nsp12 polymerase inhibitor. These pipeline changes are expected to extend the Company's cash runway through Q3 2025.

The Company remains on track to report preliminary data in the fourth quarter of this year from the Phase 2a clinical trial with imdusiran and Vaccitech's VTP-300 in patients with cHBV. In addition, the Company has dosed the first subject in its Phase 1a/1b clinical trial with its oral PD-L1 inhibitor, AB-101, for HBV and expects preliminary data in the first half of 2024.

"We are confident that our current clinical focus on HBV and our most advanced clinical stage compounds, imdusiran and AB-101, will best position us for success in our mission to achieve a functional cure for HBV," commented William Collier, Arbutus President and Chief Executive Officer. "Imdusiran has a strong foundation of safety and efficacy data, and we are actively advancing multiple ongoing Phase 2a combination clinical trials. We are also making progress on advancing AB-101, our oral PD-L1 Inhibitor for HBV, which is highly potent with demonstrated activity against PD-L1 in cells from chronic HBV subjects. We recently dosed the first subject in our Phase 1a/1b clinical trial for AB-101 and continue to believe that checkpoint inhibitors may play a role in antiviral immune tolerance in cHBV."

The AB-101-001 Phase 1a/1b double-blind, randomized, placebo-controlled, clinical trial is 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 up to 64 healthy subjects, followed by multiple ascending doses in up to 40 healthy subjects and culminating with multiple doses in up to 60 patients with cHBV. Safety and PK/PD assessments will be performed prior to dose escalation in all study parts. Initial data from part one of the clinical trial are expected in the first half of 2024.

These pipeline updates will not impact 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. There are no updates to the status of the Pfizer/BioNTech lawsuit at this time.

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 is the only RNAi that 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. We are also exploring oncology applications for our internal PD-L1 portfolio. 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; and our expected financial condition, including the anticipated duration of cash runways and timing regarding needs for additional capital.

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.

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Contact Information

Investors and Media

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Arbutus BIOPHARMA

Corporate Presentation

NASDAQ: ABUS

www.arbutusbio.com

September 11, 2023

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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.

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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.

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

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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 through Q3 2025	Receiving licensing royalties arising from Alnylam's Onpattro® and seeking damages for Moderna & Pfizer/BioNTech COVID-19 vaccine sales

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

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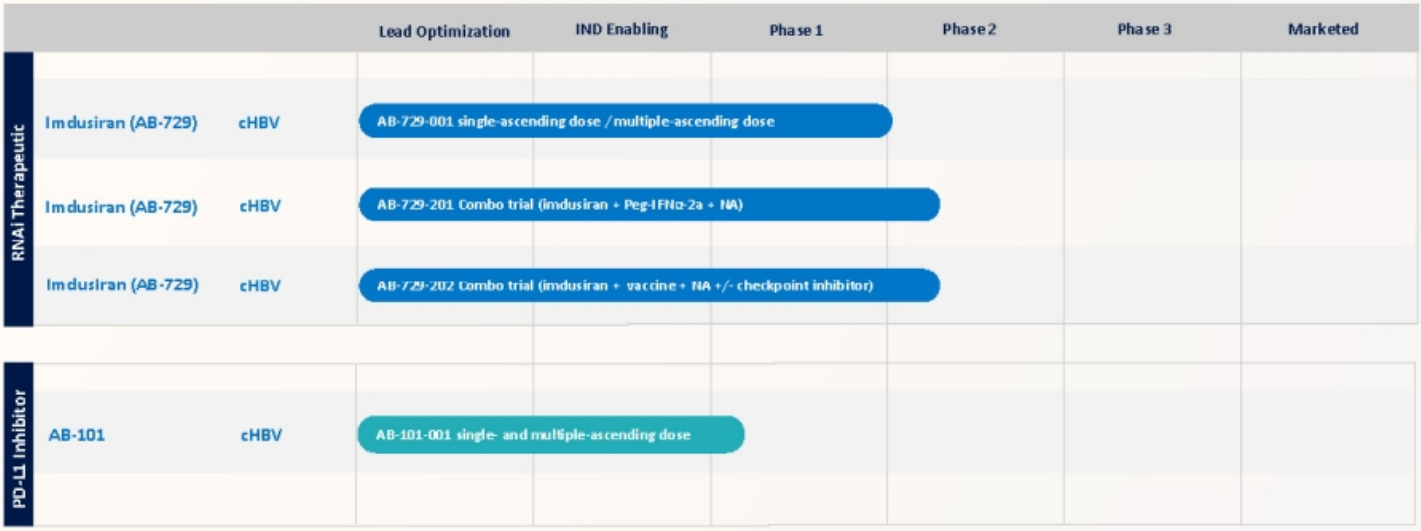
Pipeline



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NA: Nucleoside Analogue

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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

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

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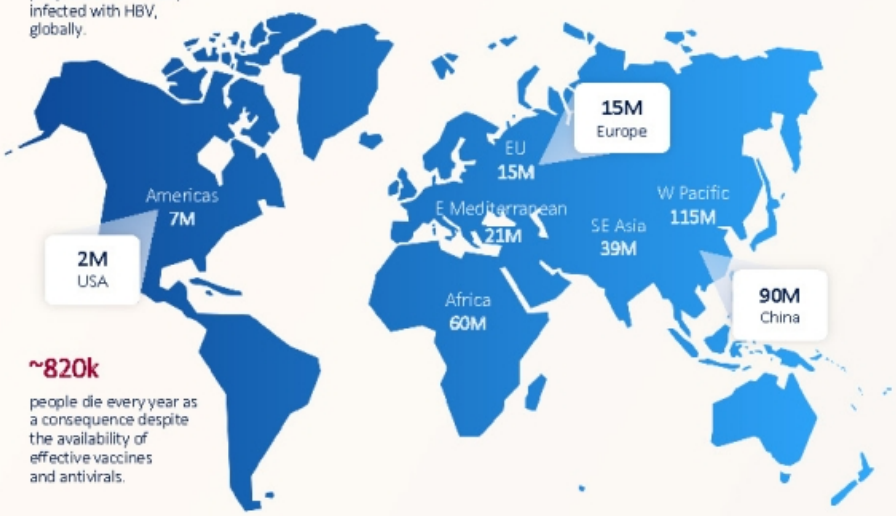
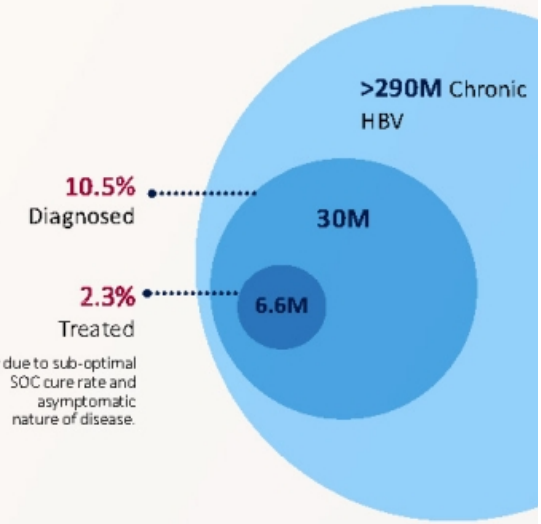
HBV Presents a Significant Unmet Medical Need

>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.

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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/

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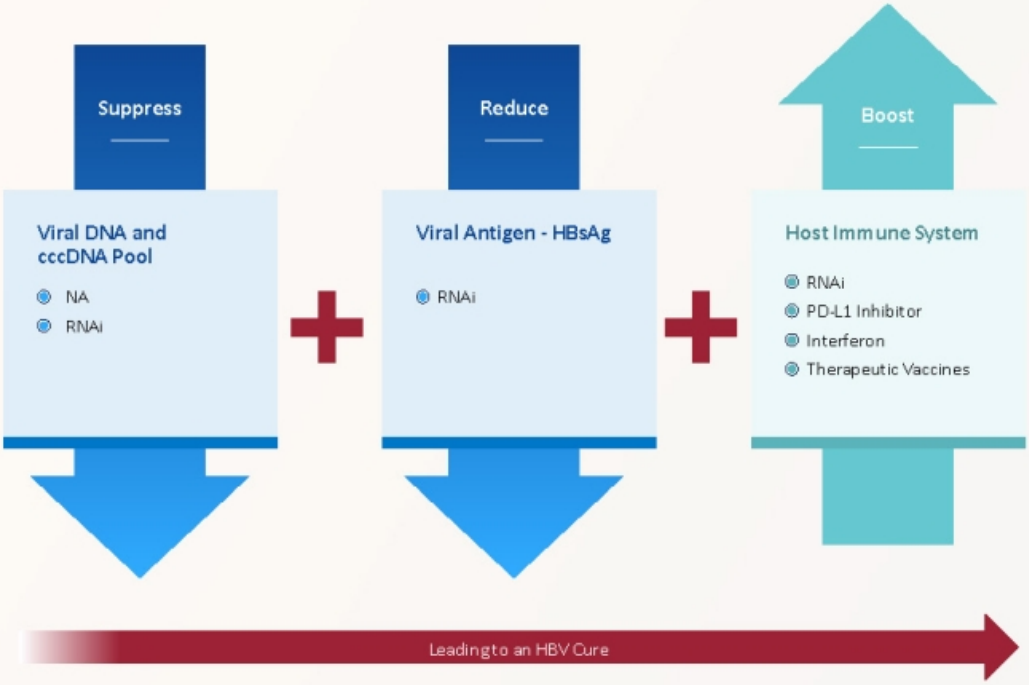
3-Pronged Approach to Therapeutic Success

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

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



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RNAi Therapeutic
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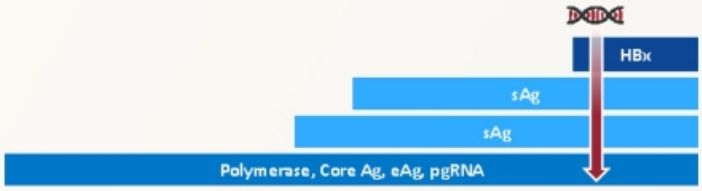
9

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**

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

Data presented at EASL 2022

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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

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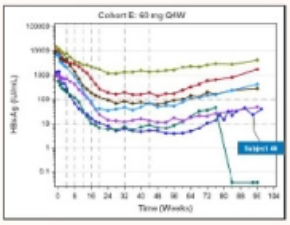
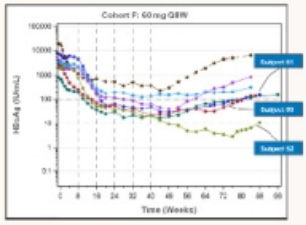
AB-729-001: Robust & Sustained HBsAg Declines While On- or Off-Treatment with Imdusiran

Change in HBsAg vs time

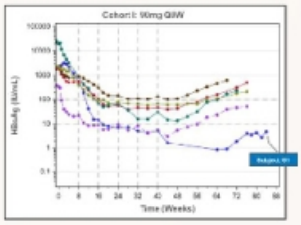
Cohort E



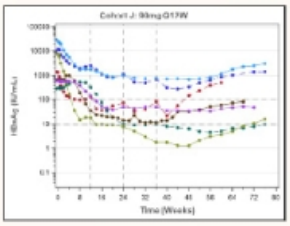
Cohort F



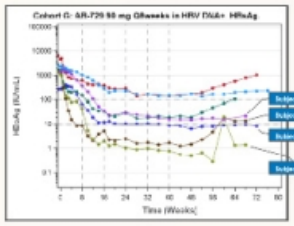
Cohort I



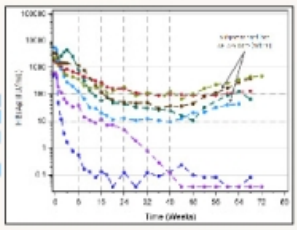
Cohort J



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

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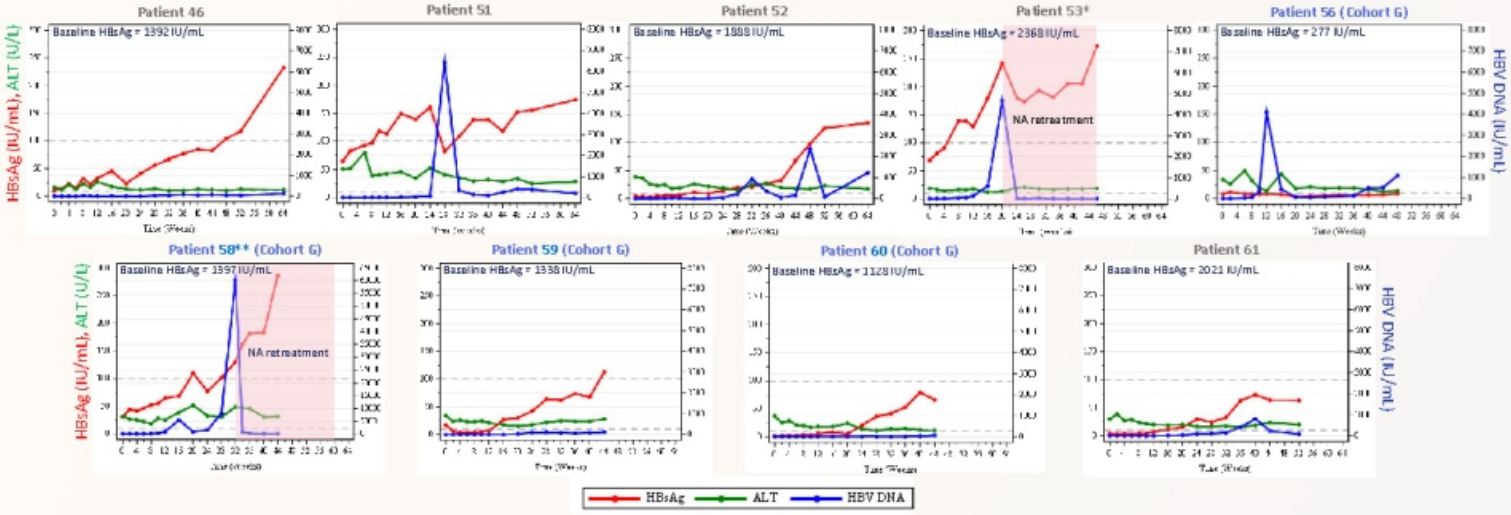
AB-729-001: Imdusiran Shows Low Levels of HBV Biomarkers Persisting in cHBV Patients While Off-Treatment



- 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).

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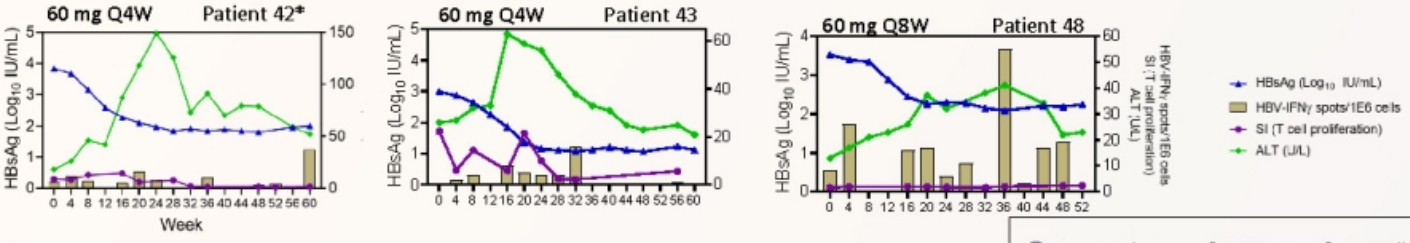
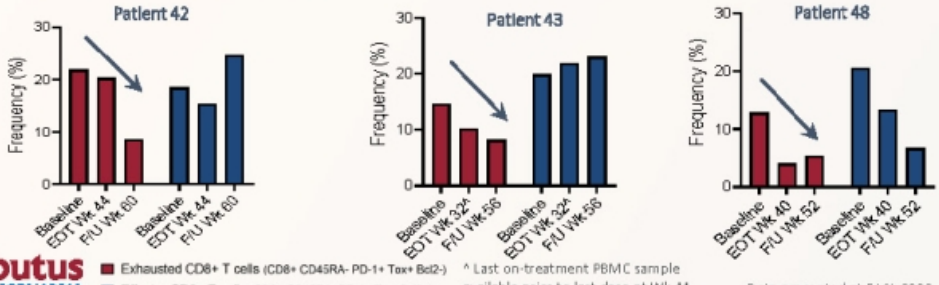
AB-729-001: Treatment with Imdusiran Reactivates HBV Specific Immunity in Some Patients

Imdusiran Increased HBV-Specific T-Cell Activation



Imdusiran Decreased Exhausted T-Cells



- 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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Exhausted CD8+ T cells (CD8+ CD45RA- PD-1+ Tox+ Bcl2-)

Effector CD8+ T cells (CD8+ CD45RA- PD-1+ Tox- Bcl2+)

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

Data presented at EASL 2022

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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

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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

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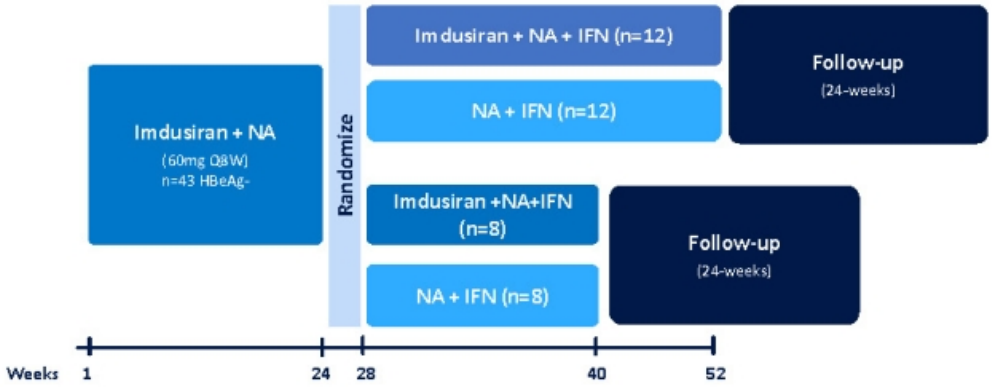
AB-729-201:

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

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AB-729-202:

Phase 2a POC Clinical Trial

vaccitech

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

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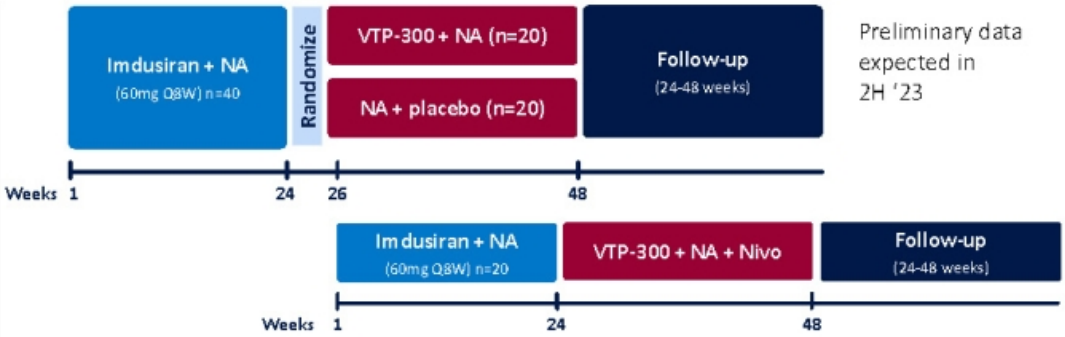

Preliminary data expected in 2H '23

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

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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

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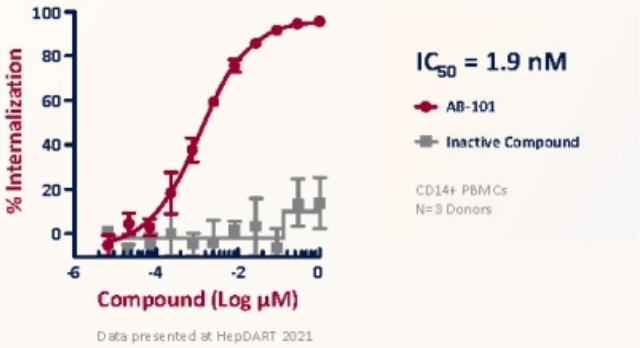
Oral PD-L1
Inhibitor
Arbutus
BIOPHARMA
21

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

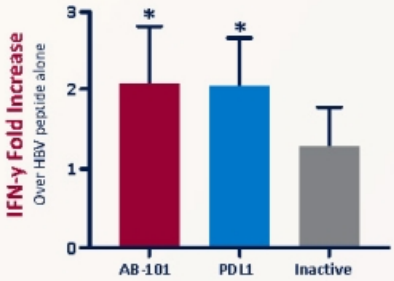
AB-101 is highly potent with demonstrated activity against PD-L1 in cells from chronic HBV patients

AB-101 reduces PD-L1 on the surface of human primary myeloid cells



Data presented at HepDART 2021

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



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

PBMC: Peripheral Blood Mononuclear Cells

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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

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2023 Key Milestones

Cash balance* of $164M as of June 30, 2023, cash runway through Q3 2025; 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	2H
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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