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 9, 2022

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 9, 2022, Arbutus Biopharma Corporation (the "Company") issued a press release announcing its financial results for the third quarter ended September 30, 2022 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 9, 2022, 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.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	**Description**
99.1	Press release dated November 9, 2022
99.2	Corporate Presentation dated November 9, 2022
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: November 9, 2022

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

Arbutus Reports Third Quarter 2022 Financial Results and Provides Corporate Update

Financially strong with a projected cash runway into the second quarter of 2024

HBsAg and HBV DNA remain at low levels with no evidence of clinical relapse up to 44 weeks after discontinuing AB-729, our RNAi therapeutic, and NA therapy

On-track to achieve multiple additional milestones before year end

Conference call and webcast today at 8:45 AM ET

WARMINSTER, Pa., Nov. 09, 2022 (GLOBE NEWSWIRE) -- Arbutus Biopharma Corporation (Nasdaq: ABUS), a clinical-stage biopharmaceutical company leveraging its extensive virology expertise to develop novel therapeutics that target specific viral diseases, today reports its third quarter 2022 financial results and provides corporate updates.

"This quarter we continued to advance our pipeline of clinical and preclinical programs in support of our mission to develop a functional cure for patients with chronic hepatitis B virus (cHBV) and to treat COVID-19 and future coronavirus outbreaks," said William Collier, Arbutus' President and Chief Executive Officer. "We reported at AASLD off-treatment data which showed that AB-729 treatment results in long-lasting control of HBV biomarker levels. We continue to believe that AB-729 can be a cornerstone agent in a potential curative combination treatment for cHBV based on the body of data supporting its impact on HBV markers and immune activation properties, safety profile and convenient dosing schedule."

Mr. Collier continued, "Looking ahead, we are on-track to achieve our remaining 2022 milestones including reporting data from our Phase 2 clinical trial evaluating AB-729 with interferon, completing IND-enabling studies with AB-161, our RNAi destabilizer, and AB-101, our PD-L1 inhibitor, and nominating a compound that inhibits the SARS-CoV-2 nsp5 main protease and has pan-coronavirus inhibitor properties."

Pipeline Updates:
AB-729 (RNAi Therapeutic)

- Presented additional off-treatment data from AB-729-001 at the AASLD Liver Meeting, showing that HBsAg levels remained well below pre-trial levels in nine of nine patients who were eligible and elected to stop therapy, suggestive of immunological control, with no patient meeting protocol-defined criteria to restart NA therapy.
- The Phase 2a clinical trial evaluating AB-729 in combination with NA therapy and short courses of Peg-IFNα-2a (AB-729-201) in cHBV patients is continuing. The Company is on-track to report initial data this quarter.
- Enrollment is on-going in the AB-729-202 Phase 2a clinical trial evaluating AB-729, in combination with VTP-300, Vaccitech plc's (Vaccitech) therapeutic vaccine, and NA, in cHBV patients.
- Presented preliminary data from the Phase 2a clinical trial evaluating AB-729 and NA in combination with vebicorvir (VBR), Assembly Biosciences, Inc.'s first generation HBV core inhibitor (capsid inhibitor), at AASLD showing that the combination of VBR+AB-729+NA does not result in greater on-treatment improvements in markers of active HBV infection as compared to AB-729+NA alone. The addition of VBR did not negatively impact the reduction of HBsAg, in the triple combination arm.

AB-101 (Oral PD-L1 Inhibitor)

- At AASLD, presented preclinical data in mice infected with HBV showing that combination treatment with AB-101 and an HBV targeting GalNAc-siRNA agent resulted in activation and increased frequency of HBV-specific T-cells and greater anti-HBsAg antibody production. The Company is on-track to complete IND-enabling studies for AB-101 this year.

AB-161 (Oral RNA Destabilizer)

- At the Discovery on Target Conference, presented preclinical data showing that AB-161 reduced HBV RNA and HBsAg in multiple preclinical models, with favorable liver centricity and lack of observed peripheral neuropathy. The Company is conducting the remaining IND-enabling studies which are expected to be complete by the end of the year.

AB-836 (Oral Capsid Inhibitor)

- Discontinued development of AB-836 based on additional ALT elevations seen in the new healthy volunteer arm of the AB-836-001 clinical trial.

COVID-19 and Pan-Coronavirus Programs

- The Company is on-track to nominate a lead candidate that inhibits the SARS-CoV-2 nsp5 main protease (M^{pro}) this year and then advance that compound into IND-enabling studies.
- The Company is continuing lead optimization activities for an nsp12 viral polymerase candidate.

Financial Results

Cash, Cash Equivalents and Investments

As of September 30, 2022, the Company had cash, cash equivalents and investments in marketable securities of $190.2 million, as compared to $191.0 million as of December 31, 2021.

During the nine months ended September 30, 2022, the Company received a $40.0 million (net of withholding taxes) upfront payment from Qilu Pharmaceutical Co., Ltd. ("Qilu") related to a technology transfer and license agreement for AB-729 in greater China, $15.0 million of gross proceeds from Qilu's equity investment in the Company and $9.2 million of net proceeds from the issuance of common shares under Arbutus's "at-the-market" offering program. These cash inflows were partially offset by $62.4 million of cash used in operations. The Company expects a net cash burn between $90 to $95 million in 2022, not including the $55 million of proceeds received from Qilu, and believes its cash runway will be sufficient to fund operations into the second quarter of 2024.

Revenue

Total revenue was $6.0 million for the three months ended September 30, 2022 compared to $3.3 million for the same period in 2021. The increase of $2.7 million was due primarily to $2.3 million of revenue recognition from the Company's license agreement with Qilu based on employee labor hours expended by the Company during the three months ended September 30, 2022 to perform its manufacturing obligations under the license agreement.

Operating Expenses

Research and development expenses were $20.1 million for the three months ended September 30, 2022, compared to $16.7 million for the same period in 2021. The increase of $3.4 million was due primarily to an increase in expenses related to the Company's multiple, ongoing AB-729 Phase 2a clinical trials, including its collaborations with Assembly and Vaccitech, and an increase in expenses for its early-stage development programs, including AB-101 and AB-161. General and administrative expenses were $3.5 million for the three months ended September 30, 2022, compared to $4.2 million for the same period in 2021. This decrease was due primarily to an arbitrator's award of $0.5 million during the three months ended September 30, 2022 for recovery of costs and attorneys' fees related to an arbitration matter with the University of British Columbia.

Net Loss

For the three months ended September 30, 2022, the Company's net loss attributable to common shares was $17.6 million, or a loss of $0.12 per basic and diluted common share, as compared to a net loss attributable to common shares of $24.2 million, or a loss of $0.24 per basic and diluted common share, for the three months ended September 30, 2021. Net loss attributable to common shares for the three months ended September 30, 2021 included $5.1 million of non-cash expense for the accrual coupon on the Company's convertible preferred shares, which converted into 22.8 million common shares in October 2021.

Outstanding Shares

As of September 30, 2022, the Company had approximately 152.7 million common shares issued and outstanding, as well as approximately 15.9 million stock options outstanding. Roivant Sciences Ltd. owned approximately 25% of the Company's outstanding common shares as of September 30, 2022.

COVID-19 Impact

The COVID-19 pandemic has resulted in and will likely continue to result in significant disruptions to businesses. Measures implemented around the world in attempts to slow the spread of COVID-19 have had, and will likely continue to have, a major impact on clinical development, at least in the near-term, including shortages and delays in the supply chain and prohibitions in certain countries on enrolling subjects and patients in new clinical trials. While the Company has been able to progress with its clinical and pre-clinical activities to date, it is not possible to predict if the COVID-19 pandemic will materially impact the Company's plans and timelines in the future.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Revenue				
Collaborations and licenses	$ 3,607	$ 1,480	$ 27,381	$ 3,819
Non-cash royalty revenue	2,345	1,860	5,393	3,963
Total Revenue	5,952	3,340	32,774	7,782
Operating expenses				
Research and development	20,055	16,709	61,459	46,290
General and administrative	3,493	4,183	13,585	12,539
Change in fair value of contingent consideration	215	856	624	1,679
Total operating expenses	23,763	21,748	75,668	60,508
Loss from operations	(17,811)	(18,408)	(42,894)	(52,726)
Other income (loss)				
Interest income	694	27	1,249	97
Interest expense	(429)	(762)	(1,417)	(2,297)
Foreign exchange loss	(21)	(15)	(18)	-
Total other income (loss)	244	(750)	(186)	(2,200)
Loss before income taxes	(17,567)	(19,158)	(43,080)	(54,926)
Income tax expense	-	-	(4,444)	-
Net loss	(17,567)	(19,158)	(47,524)	(54,926)
Dividend accretion of convertible preferred shares	-	(5,087)	-	(11,565)
Net loss attributable to common shares	$ (17,567)	$ (24,245)	$ (47,524)	$ (66,491)
Loss per share				
Basic and diluted	$ (0.12)	$ (0.24)	$ (0.32)	$ (0.68)
Weighted average number of common shares				
Basic and diluted	150,995,191	101,286,351	149,385,999	97,174,253

UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands)

	September 30, 2022	December 31, 2021
Cash, cash equivalents and marketable securities, current	$ 134,718	$ 155,317
Accounts receivable and other current assets	6,418	5,344
Total current assets	141,136	160,661
Property and equipment, net of accumulated depreciation	5,241	5,983
Investments in marketable securities, non-current	55,436	35,688
Right of use asset	1,821	2,092
Other non-current assets	167	61
Total assets	$ 203,801	$ 204,485
Accounts payable and accrued liabilities	$ 12,268	$ 10,838
Deferred revenue	14,878	-
Lease liability, current	360	383
Total current liabilities	27,506	11,221
Liability related to sale of future royalties	12,316	16,296
Deferred revenue, non-current	10,585	-
Contingent consideration	5,922	5,298
Lease liability, non-current	1,955	2,231
Total stockholders' equity	145,517	169,439
Total liabilities and stockholders' equity	$ 203,801	$ 204,485

UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOW
(in thousands)

	Nine Months Ended September 30,	
	2022	**2021**
Net loss	$ (47,524)	$ (54,926)
Non-cash items	3,429	7,080
Change in deferred license revenue	25,463	-
Other changes in working capital	266	(80)
Net cash used in operating activities	(18,366)	(47,926)
Net cash used in investing activities	(87,624)	(4,557)
Issuance of common shares pursuant to Share Purchase Agreement	10,973	-
Cash provided by other financing activities	9,757	78,115
Net cash provided by financing activities	20,730	78,115
Effect of foreign exchange rate changes on cash and cash equivalents	(18)	-
(Decrease) increase in cash and cash equivalents	(85,278)	25,632
Cash and cash equivalents, beginning of period	109,282	52,251
Cash and cash equivalents, end of period	24,004	77,883
Investments in marketable securities	166,150	74,054
Cash, cash equivalents and marketable securities, end of period	$ 190,154	$ 151,937

Conference Call and Webcast Today

Arbutus will hold a conference call and webcast today, Wednesday, November 9, 2022, 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 AB-729

AB-729 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. AB-729 targets hepatocytes using Arbutus' novel covalently conjugated N-Acetylgalactosamine (GalNAc) delivery technology enabling subcutaneous delivery. Clinical data generated thus far has shown single- and multi-doses of AB-729 to be generally safe and well-tolerated, while also providing meaningful reductions in hepatitis B surface antigen and hepatitis B DNA. AB-729 is currently in multiple Phase 2a clinical trials.

About AB-101

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. We have identified a class of small molecule oral PD-L1 inhibitors that we believe will allow for controlled checkpoint blockade, enable oral dosing, and mitigate systemic safety issues typically seen with checkpoint antibody therapies. Our lead oral PD-L1 inhibitor candidate, AB-101, is currently in IND-enabling studies. We believe AB-101, when used in combination with other approved and investigational agents, could potentially allow us to realize our mission of achieving a functional cure for HBV chronically infected patients. We are also exploring oncology applications for our internal PD-L1 portfolio.

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 develop novel therapeutics that target specific viral diseases. Our current focus areas include Hepatitis B virus (HBV), SARS-CoV-2, and other coronaviruses. To address HBV, we are developing a RNAi therapeutic, an oral PD-L1 inhibitor, and an oral RNA destabilizer to potentially identify a combination regimen with the aim of providing a functional cure for patients with chronic HBV by suppressing viral replication, reducing surface antigen and reawakening the immune system. We believe our lead compound, AB-729, is the only RNAi therapeutic with evidence of immune re-awakening. It is currently being evaluated in multiple phase 2 clinical trials. We also have an ongoing drug discovery and development program directed to identifying novel, orally active agents for treating coronavirus (including SARS-CoV-2). In addition, we are 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; 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 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 COVID-19 pandemic and 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: 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; Arbutus and its collaborators may never realize the expected benefits of the collaborations; market shifts may require a change in strategic focus; and the ongoing COVID-19 pandemic could significantly disrupt Arbutus' clinical development programs.

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

Contact Information

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Arbutus BIOPHARMA

Corporate Presentation

NASDAQ: ABUS

www.arbutusbio.com

November 9, 2022

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' coronavirus strategy; Arbutus' expectations regarding its technology licensed to third parties; the expected timing and payments associated with strategic and/or licensing agreements; the patent infringement lawsuit against Moderna; 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 the ongoing COVID-19 pandemic and 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; the parties may never realize the expected benefits of the collaborations; and the ongoing COVID-19 pandemic could significantly disrupt Arbutus' clinical development programs. 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

Leverage the proven track record of success established with our team's expertise in understanding and treating viral infections by discovering and developing a broad, differentiated pipeline of therapies targeting chronic HBV, COVID-19, and future coronavirus outbreaks.

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.

Develop **novel oral pan coronavirus antivirals targeting essential viral proteins** with the goal of reducing hospitalizations and providing pre-exposure prophylactic therapy.

Arbutus BIOPHARMA

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

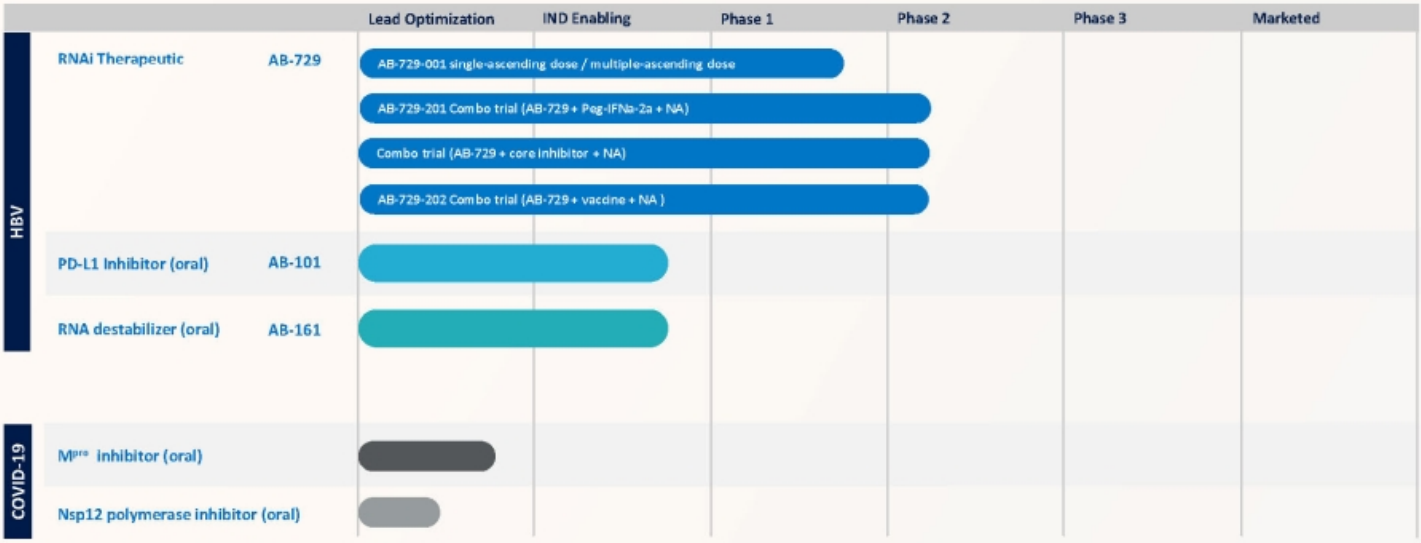
Investment Highlights

Indications with significant unmet medical need & large market opportunities	**Team with virology expertise and proven track record**	**Broad portfolio of internally discovered assets with distinct MOAs**	**Lead HBV compound – AB-729 RNAi therapeutic in multiple Phase 2a combination clinical trials**	**Strong financial position**	**Patented LNP technology**
Focused on developing functional cure for HBV and oral pan-coronavirus therapeutics	Discovered, developed & commercialized multiple drugs	RNAi therapeutic PD-L1 inhibitor RNA destabilizer M^{pro} inhibitor Nsp12 polymerase inhibitor	Data shows AB-729 is generally safe and well tolerated and has shown meaningful suppression of HBsAg while on- or off-treatment	Cash runway into Q2 2024	Receiving licensing royalties arising from Alnylam's Onpattro® and seeking damages for Moderna-COVID-19 vaccine sales

Arbutus BIOPHARMA

MOA: Mechanism of Action | **PD-L1:** Programmed death-ligand 1 | **M^{pro}:** Main protease | **NSP12:** Non-structural protein | **HBsAg:** Hepatitis B surface antigen

Broad 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

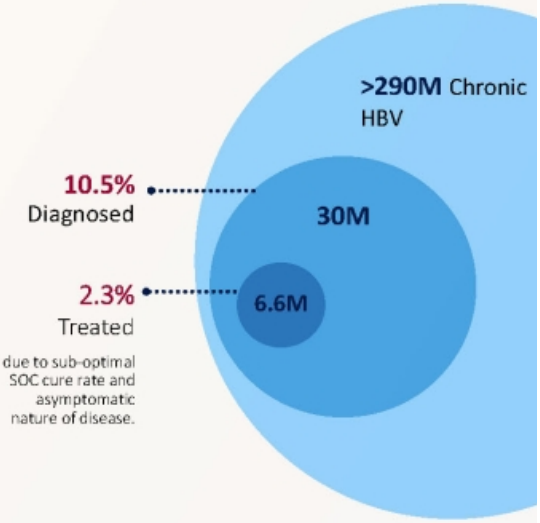
Arbutus BIOPHARMA

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.



10.5% Diagnosed

2.3% Treated

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

Arbutus BIOPHARMA

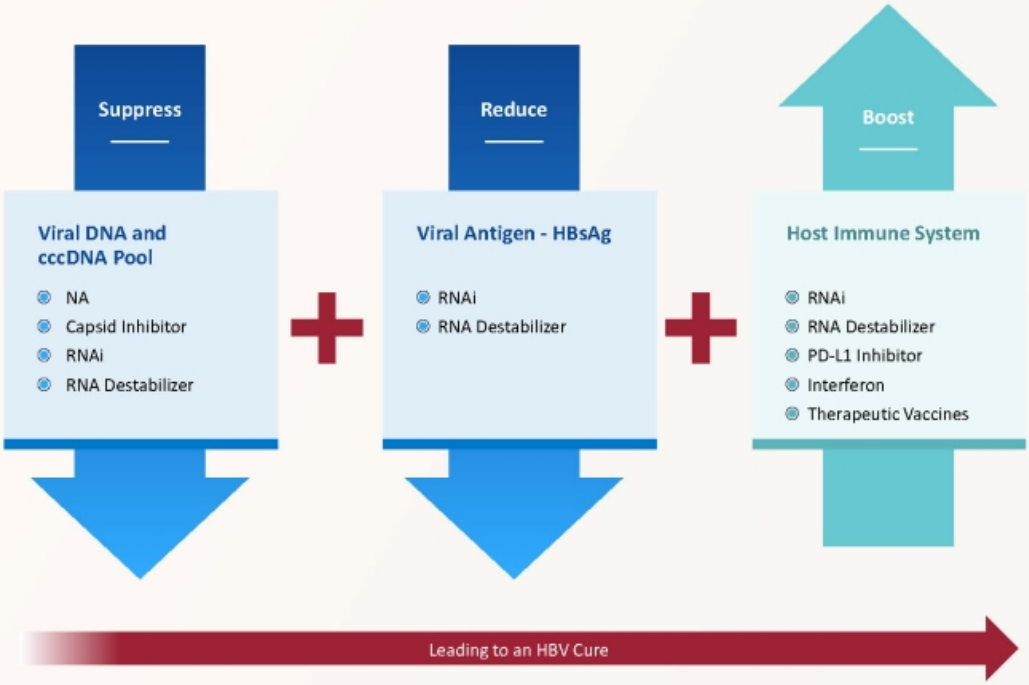
SOC: Standard of Care

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/

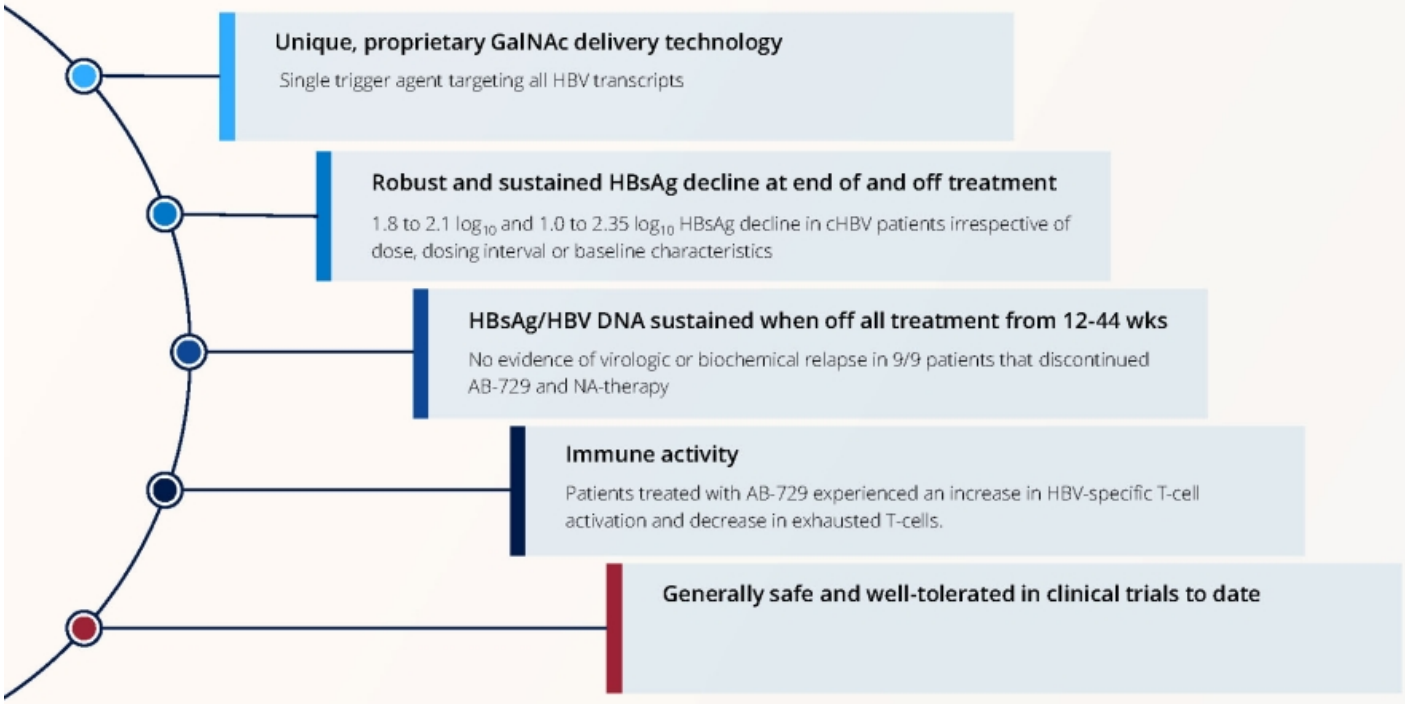
3-Pronged Approach to Therapeutic Success

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

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



AB-729 Key Attributes



Unique, proprietary GalNAc delivery technology

Single trigger agent targeting all HBV transcripts

Robust and sustained HBsAg decline at end of and off treatment

1.8 to 2.1 log_{10} and 1.0 to 2.35 log_{10} HBsAg decline in cHBV patients irrespective of dose, dosing interval or baseline characteristics

HBsAg/HBV DNA sustained when off all treatment from 12-44 wks

No evidence of virologic or biochemical relapse in 9/9 patients that discontinued AB-729 and NA-therapy

Immune activity

Patients treated with AB-729 experienced an increase in HBV-specific T-cell activation and decrease in exhausted T-cells.

Generally safe and well-tolerated in clinical trials to date

AB-729

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 capsid inhibitors
- Actively targets the liver
- Active against cccDNA derived and integrated HBsAg transcripts
- Clean profile in long term preclinical safety studies

Arbutus BIOPHARMA

AB-729-001 Phase 1a/1b Clinical Trial

Part 1 & 2:

Single-ascending dose

Robust HBsAg and HBV DNA declines in HBV DNA+ patients with AB-729 monotherapy (90mg single-dose)

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

Baseline Demographics and Clinical Characteristics

Baseline Measure[a]	HBV DNA-					HBV DNA+
	Cohort E[1] (n=7)	Cohort F (n=7)	Cohort I (n=6)[^]	Cohort J (n=7)	Cohort K[^] (n=7)	Cohort G (n=7)
Age in years, mean (range)	45.1 (33 – 63)	44.0 (31 – 59)	45.7 (38 – 54)	44.3 (35 – 61)	41.4 (21 – 57)	43.9 (34 – 50)
Male gender, n (%)	4 (57)	4 (57)	4 (67)	5 (71)	4 (57)	3 (43)
BMI, mean (SD)	27.7 (5.0)	23.7 (2.2)	25.5 (3.1)	28.7 (4.8)	25.0 (4.7)	23.8 (4.0)
Race, n (%)						
Asian	1 (14)	5 (71)	5 (83)	4 (57)	6 (86)	6 (86)
Black	0	1 (14)	0	0	0	0
White	6 (86)	1 (14)	1 (17)	3 (43)	0	1 (14)
Pacific Islander	0	0	0	0	1 (14)	0
ALT (U/L), mean (SD)	22.4 (10.5)	23.4 (15.2)	26.0 (10.2)	20.1 (7.2)	25.1 (8.9)	32.7 (15.8)
HBV eAg-, n (%)[δ]	7 (100)	6 (71)[9]	5 (83)	4 (57)	0	7 (100)
HBsAg (IU/mL), mean (range)	5,372 (584 – 11,761)	5,454 (667 – 18,605)	4,691 (338 – 19,017)	6,911 (309 – 25,345)	2,221 (545 – 5,273)	1,818 (277 – 4,723)

[a] Genotype not determined
[1] Patients switched to AB-729 60 mg Q12W for the extension phase
[^] n=6 due to 1 patient meeting exclusion criteria on D1 and a replacement patient receiving an incorrect dose on D1; both entered follow up and were excluded from analysis
[δ] One patient counted as HBeAg- was identified as "HBeAg borderline" (baseline HBeAg = 0.18 IU/mL, LLOQ = 0.11 IU/mL)
[9] Cohort K Mean (SD) Baseline HBeAg = 22.7 (37.5) IU/mL

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

Data presented at EASL 2022

Robust HBsAg Declines Irrespective of Dose, Dosing Schedule, HBeAg or HBV DNA Status

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

Nominal 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 (IU/mL)	3.51 (0.20)	3.53 (0.17)	3.36 (0.23)	3.37 (0.28)	3.23 (0.14)	3.14 (0.14)
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)
Week 24	-1.84 (0.16)	-1.57 (0.09)	-1.80 (0.23)	-1.56 (0.25)	-1.99 (0.35)	-1.82 (0.29)
Week 36	-1.84 (0.19)	-1.78 (0.10)	-2.06 (0.28)	-1.70 (0.39)	-2.50[^] (0.39)	-2.08 (0.32)
Week 48	-1.89 (0.18)	-1.90 (0.14)	1.91 (0.32)	-1.80[*] (0.41)	-2.57[#] (0.61)	-2.15 (0.34)
Week 12 Post Last Dose	-1.81 (0.17)	-1.74 (0.16)	-1.77 (0.31)	-1.80[*] (0.41)	-2.45[#] (0.66)	-1.97 (0.28)
Week 24 Post Last Dose	-1.54 (0.19)	-1.48 (0.24)	-1.67 (0.40)	-1.52 (0.40)	-2.31[#] (0.78)	-1.59 (0.31)

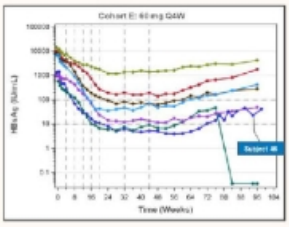
Data shown as mean (SE) log_{10} IU/mL; HBsAg LLOQ = 0.07 IU/mL, <LLOQ defined as 0.035 IU/mL Last AB-729 dose in Cohort K was at Week 40 *N=6; #N=5, 2 patients did not receive Week 40 dose and were excluded from future timepoints

- Mean declines in HBsAg on treatment and post treatment continue to be comparable across cohorts
- Results to date from a dedicated HBeAg+ cohort (Cohort K) further support preliminary observations suggesting that baseline HBeAg status has no effect on response

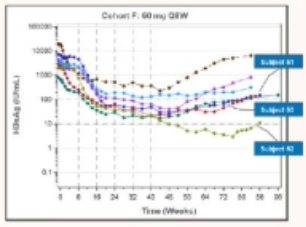
Robust HBsAg Declines Persist After Stopping AB-729

Change in HBsAg vs time

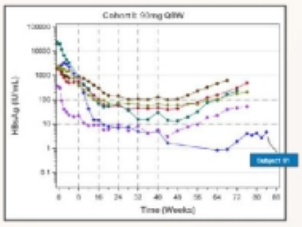
Cohort E



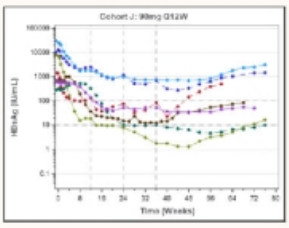
Cohort F



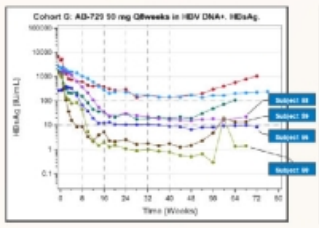
Cohort I



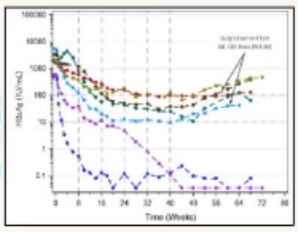
Cohort J



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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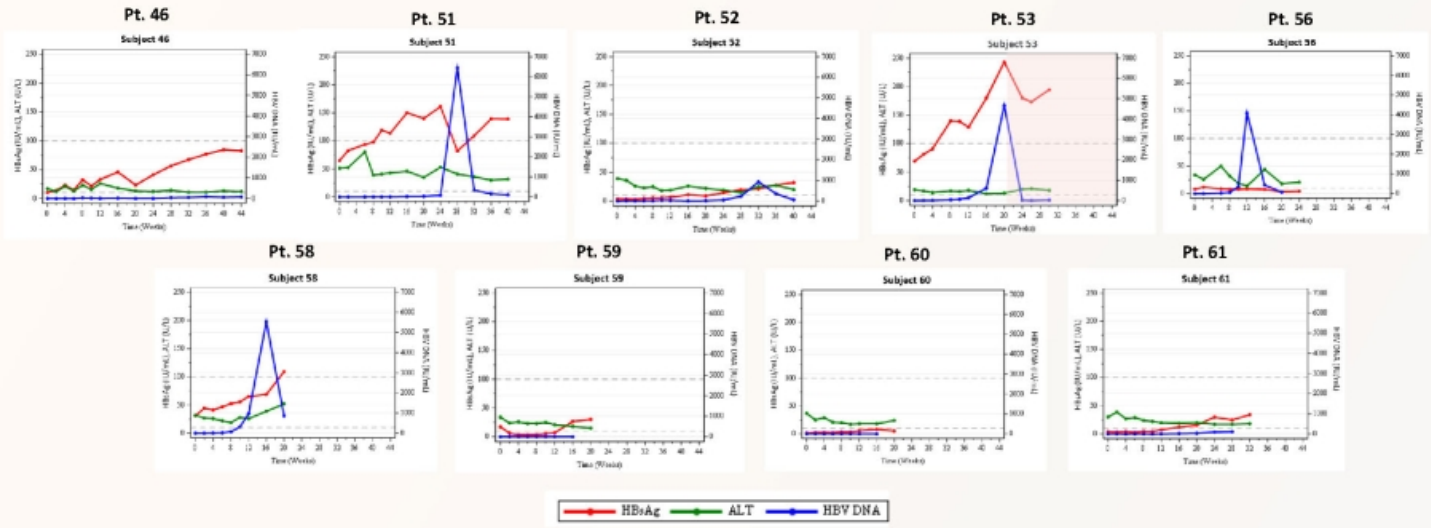
Data presented at AASLD 2022

HBV Control Maintained While Off-Treatment



- No patients have met virologic or clinical relapse criteria or restarted NA therapy to date
- HBV DNA has transiently increased in some patients and subsequently decreased with no intervention

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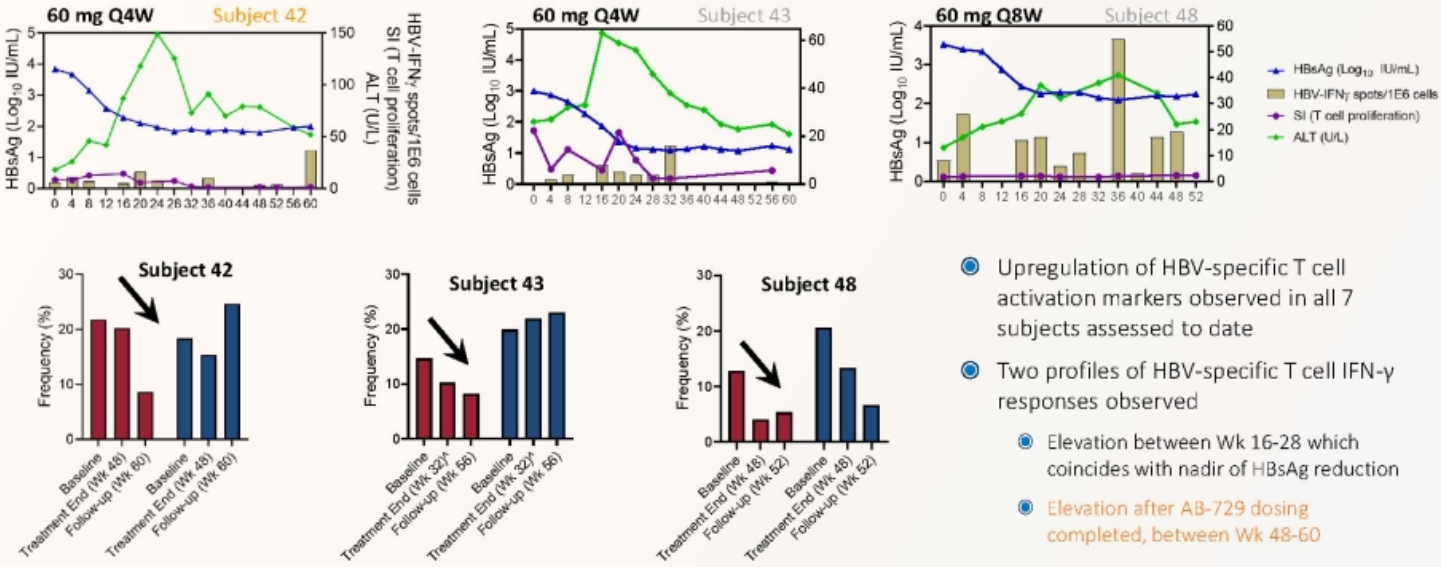
Data presented at AASLD 2022

Subjects Treated with AB-729 Showed Increased HBV-Specific T-Cell Activation and Decreased Exhausted T-Cells



- Upregulation of HBV-specific T cell activation markers observed in all 7 subjects 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 AB-729 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+)

Data presented at EASL 2022

AB-729-001 Safety Summary

- AB-729 generally safe and well-tolerated in clinical trials after single and repeat doses
- 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 TEAEs were mostly mild (erythema, pain, bruising, pruritis)
- No clinically meaningful changes in ECGs or vital signs

*1 patient (Cohort A) with rapid decline in HBsAg of ~2.0 log10 IU/mL had an unrelated Gr 2 AE of food poisoning resulting in unrelated transient Grade 3 AEs of ALT/AST elevation (without bilirubin changes)

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AE: Adverse Event | **TEAE:** Treatment Emergent Adverse Event

AB-729-001 Clinical Trial Key Takeaways

AB-729 provided robust and comparable HBsAg declines regardless of dose, dosing interval, HBeAg or DNA status

- ~75% (26 of 34) patients had HBsAg levels <100 at some point during the trial
- 50% (16 of 32) patients maintained HBsAg <100 IU/mL for 24 weeks after stopping AB-729 treatment

Discontinuation of both AB-729 and NA-therapy results in a sustained reduction in HBsAg

- No evidence of virologic or biochemical relapse detected in 9 patients who discontinued all therapy from 12 to 44 weeks. No patient met protocol-defined criteria to restart NA-therapy as of date data was presented.*

AB-729 continues to result in HBV-specific T-cell immune restoration and decrease of exhausted T-cells

AB-729 was generally safe and well-tolerated after completing dosing in 41 patients

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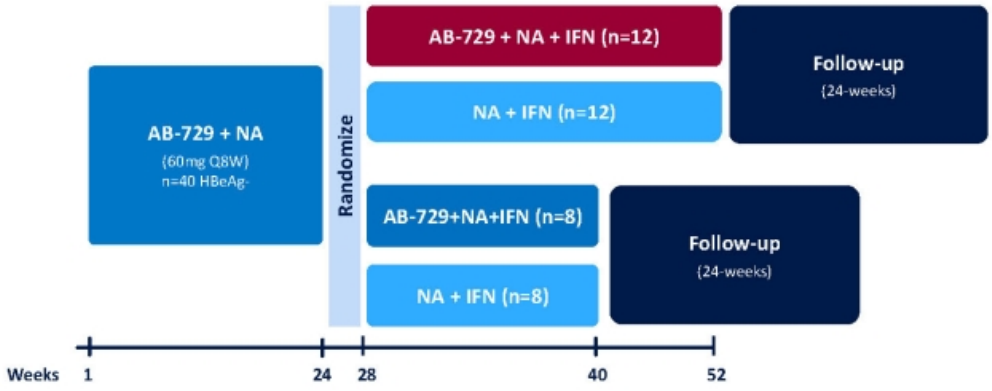
* Data presented at AASLD 2022

AB-729-201:

Phase 2a POC Clinical Trial

AB-729 in combination with **ongoing NA therapy and short courses of Peg-IFNα-2a in cHBV patients**

Initial data expected 2H 2022



Multi-center, open-label Phase 2a

Primary objective: evaluate safety and tolerability of AB-729 in combination with Peg-IFNa-2a in patients with NA-suppressed cHBV

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

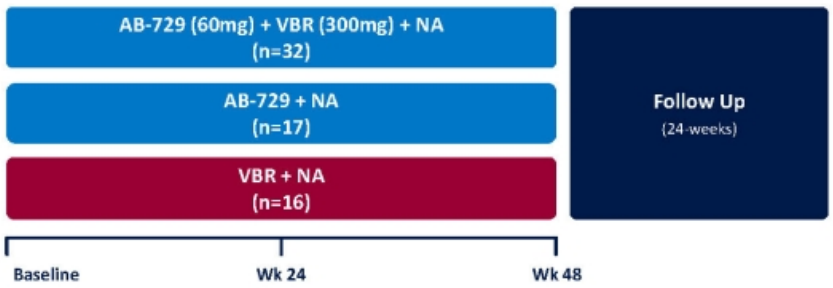
POC: Proof of Concept

AB-729

Clinical Collaboration

assemblybio

Provides accelerated AB-729 combination POC with Assembly's capsid inhibitor and a NA



Primary objective: evaluate safety and tolerability of vebicorvir (VBR) in combination with AB-729 in patients with cHBV receiving NA therapy

n= 65 virologically-suppressed patients with cHBV infection

Preliminary results:

Adding VBR to AB-729+NA:

- Does not result in greater on-treatment improvements in HBV biomarkers as compared to AB-729+NA alone.
- Does not have a negative impact on reducing sAg.

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AB-729-202:

Phase 2a POC Clinical Trial

vaccitech

POC Phase 2a clinical trial evaluating AB-729 in combination with Vaccitech's immunotherapeutic, VTP-300, and a NA

First patient dosed

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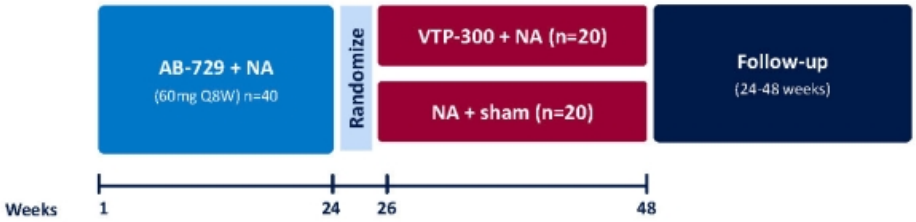

Primary objective: evaluate safety and reactogenicity of AB-729 followed by VTP-300 or placebo

At week 48 all participants who are eligible to discontinue NA therapy will be followed for 48-weeks

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

AB-729

Strategic Collaboration

QILU PHARMACEUTICAL

Exclusive Licensing* and Strategic Partnership

Develop, manufacture and commercialize AB-729 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
$15M	Equity investment
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

AB-161: Next Generation Oral RNA Destabilizer

Safety

Next generation small molecule anticipated to circumvent non-clinical safety findings with first generation molecule

Novelty

Offers a novel mechanism of action to **reduce HBsAg, other viral proteins and viral RNA**

Convenience

Potential for an **oral HBsAg reducing agent** and all oral combination therapy

AB-161 is currently in IND-enabling studies

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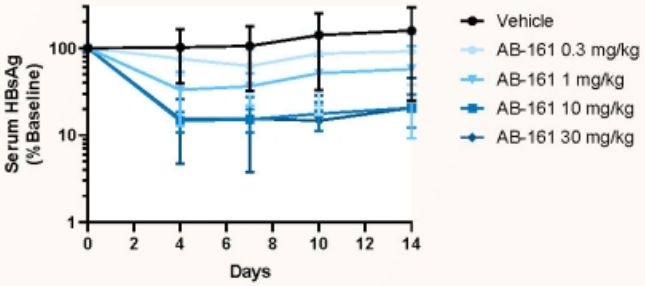
AB-161 Reduces HBsAg in AAV-HBV Mouse Model

Compound concentration in liver drives efficacy

- AB-161 effective as a once-daily dose in AAV-HBV mouse model (0.3, 1, 10, 30 mg/kg QD)
  - Dose-dependent reduction of HBsAg, also observed with BID dosing (0.3 and 1 mg/kg BID)
- HBsAg reduction achieved when fraction unbound C_{24h} > EC_{90} in liver

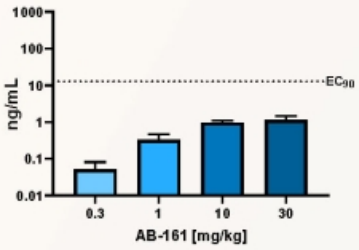
AAV-HBV mouse

AB-161 QD for 14 days

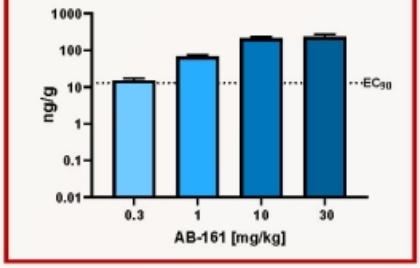


Fraction Unbound Concentrations (C_{24h})

$[AB\text{-}161]_{free}$: plasma



$[AB\text{-}161]_{free}$: liver



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Data presented at Discovery on Target Conference, October 2022

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*

AB-101 is currently in IND-enabling studies

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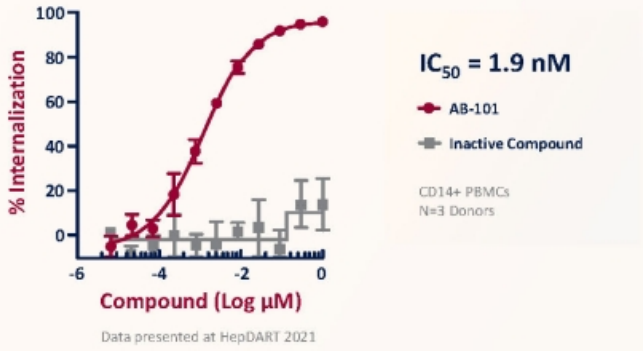
PD-1: Programmed death ligand protein | **Abs:** Antibodies

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

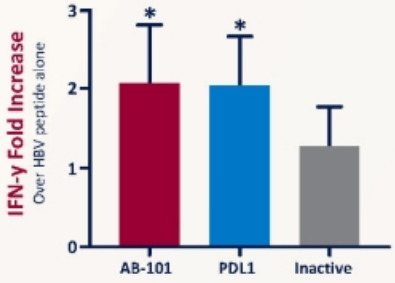
AB-101 is highly potent with demonstrated activity against cells from chronic HBV patients

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

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PBMC: Peripheral Blood Mononuclear Cells

Pan-Coronavirus Overview

Cause & Symptoms

- Coronavirus Infections, such as COVID-19 caused by SAR-CoV-2
- Spreads through breathing out droplets and small particles that contain the virus
- Older adults and people with severe underlying conditions at higher risk of developing serious complications
- Virus continues to mutate with variant strains developing

Population

- ~6.9M deaths globally[1]
- In US: ~80M cases; 1M deaths (as of March 2022)

Treatments

Vaccines

- Durability of effect uncertain, boosters required, limited efficacy on variant strains

Therapies

- Sub-optimal

Rationale

- Pan-coronavirus focused: need for effective and safe therapies to combat COVID-19 and future coronavirus outbreaks
- Address essential viral targets – nsp12 viral polymerase and nsp5 viral protease
- Potential for combo therapy to enhance efficacy and reduce symptomology

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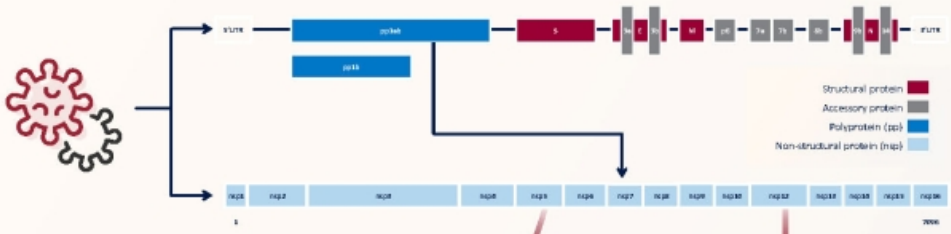
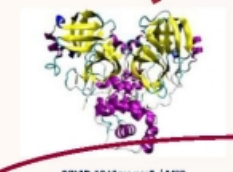
[1] https://www.healthdata.org/special-analysis/estimation-excess-mortality-due-covid-19-and-scalars-reported-covid-19-deaths

Coronavirus Strategy

Leveraging our proven expertise and capabilities in antiviral drug discovery and development

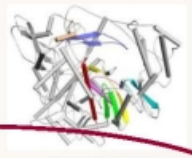


nsp5 protease & nsp12 polymerase essential enzymes for replication



COVID-19 Virus nsp5 / M^{pro}

Viral Protease
de novo design



COVID-19 Virus nsp12

Viral Polymerase
nucleos(t)ides

X-CHEM | PROTEROS
REACH RIGHT FASTER

Collaboration

- Proprietary DEL library screening and structural biology for M^{PRO} inhibitor discovery
- First milestone reached; several unique compound series that inhibit nsp5 protease identified
- Advancing to lead optimization stage

Arbutus Strategy

- Pan-coronavirus focused
- Positioned to nominate a clinical candidate against one of these targets in 2022

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2022 Key Milestones

Cash balance* of $190.2M as of September 30, 2022, cash runway into Q2 2024

Milestone	Anticipated Timing 2022
AB-836, next generation oral capsid inhibitor: Data from Phase 1a/1b clinical trial in patients with chronic HBV	1H ✓
AB-729, RNAi therapeutic: Initiate a triple combination Phase 2a POC clinical trial with VTP-300 (Vaccitech) and a NA	1H ✓
AB-729: Follow-up data (long-term on- and off-treatment) from Phase 1a/1b, evaluating multiple doses and dosing schedules	1H ✓ / 2H ✓
AB-729: Initial data from Phase 2a combination trial with NA therapy and Peg-IFNα-2a	2H
AB-729: Initial data from Phase 2a combination trial with VBR (Assembly) and a NA	2H ✓
AB-101, oral PD-L1 inhibitor compound: Complete IND-enabling studies	2H
AB-161, next generation oral RNA destabilizer: Complete IND-enabling studies	2H
COVID M^{pro}: Advance clinical candidate that inhibits the SARS-CoV-2 nsp5 main protease into IND-enabling studies	2H

*Consists of cash, cash equivalents and marketable securities

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Thank You

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