

**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**

May 20, 2019

(Date of Report - date of earliest event reported)

**Arbutus Biopharma Corporation**

(Exact Name of Registrant as Specified in Its Charter)

**British Columbia, Canada**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**001-34949**  
(Commission File Number)

**98-0597776**  
(I.R.S. Employer  
Identification No.)

**701 Veterans Circle**  
**Warminster, Pennsylvania**  
(Address of Principal Executive Offices)

**18974**  
(Zip Code)

**(604) 419-3200**  
(Registrant's Telephone Number, Including Area Code)

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:

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Shares, no 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 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

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 May 20, 2019, Arbutus Biopharma Corporation (the “Company”) posted an updated corporate presentation on its website at [www.arbutusbio.com](http://www.arbutusbio.com). A copy of the presentation is filed herewith as Exhibit 99.1 and is incorporated by reference herein.

**Item 9.01 Financial Statements and Exhibits**

**(d) Exhibits.**

<b>Exhibit Number</b>	<b>Description</b>
99.1	<a href="#">Corporate presentation dated May 20, 2019.</a>

**SIGNATURES**

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.

Date: May 20, 2019

**ARBUTUS BIOPHARMA CORPORATION**

By: /s/David C. Hastings

Name: David C. Hastings

Title: Chief Financial Officer



# Singularly Focused on HBV

May 2019

NASDAQ: ABUS

[www.arbutusbio.com](http://www.arbutusbio.com)

# 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 for HBV to have a larger market opportunity than HCV; our ability to meet a significant unmet medical need; our path to a potential clinical combination in 2020; the sufficiency of our cash and cash equivalents to extend into 2020; our ability to develop a curative regimen for HBV and unlock significant market growth opportunities; our expectations regarding the initiation, timing and completion of preclinical studies and clinical trials; our expectation for top-line safety and efficacy results from an interim analysis of the initial Phase 1a/1b clinical trial of AB-506 in July 2019 and our intention for there to be additional dosing cohorts in combination with NA in the second half of 2019; our expectation to make a decision regarding AB-452 clinical development in early 2020; our expectation to initiate a Phase 2a dose-finding and long-term safety trial of AB-506 late in the second half of 2019; the potential initiation of a Phase 1 clinical trial for AB-729 in the second half of 2019 with top line single-dose HBV data and top line multi-dose HBV data available in 2020; the trajectory for inclusion of AB-506 in a multi-drug combination regimen with AB-729 in 2020; our goal to have a second generation candidate nominated by the end of 2019; and the timeline to a combination cure for HBV.

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 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. 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; Arbutus may not receive the necessary regulatory approvals for the clinical development of Arbutus' products; economic and market conditions may worsen; and market shifts may require a change in strategic focus. A more complete discussion of the risks and uncertainties facing Arbutus appears in Arbutus' Annual Report on Form 10-K and Arbutus' periodic disclosure filings which are available at [www.sec.gov](http://www.sec.gov) and at [www.sedar.com](http://www.sedar.com).

The forward-looking statements made in connection with this presentation represent our views only as of the date of this presentation (or any earlier date indicated in such statement). While we may update certain forward-looking statements from time to time, we specifically disclaim any obligation to do so, even if new information becomes available in the future.

# Investment Highlights

Singular therapeutic focus - curing chronic Hepatitis B Virus (HBV)

Significant unmet medical need in **HBV**

Global HBV prevalence double that of HCV, potential for larger market opportunity

Team with antiviral expertise & proven track record

Applying knowledge gained from HIV and HCV success to find **HBV cure through proprietary drug combinations**

Robust **HBV Portfolio**

**HBV assets** generating clinical data, leading to **clinical combination in 2020**

Strong **Financial Position**

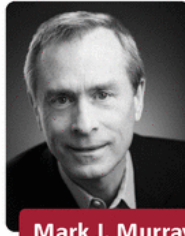
\$111M cash at 3/31/19 extends runway into 2020 **Onpatro royalty** represents non-dilutive capital

**Genevant** liberates value from delivery technology

Strategic spin out of LNP and conjugate delivery technologies to support new **RNA therapeutics company**

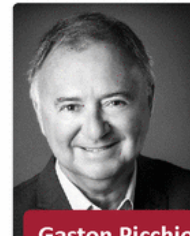
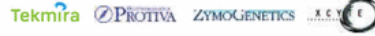
# Proven Leadership Team

Successful track records in both the discovery and development of multiple antivirals: sofosbuvir, etravirine, rilpivirine, telaprevir and simeprevir



**Mark J. Murray, PhD**

President & CEO



**Gaston Picchio, PhD**

Chief Development Officer



**David C. Hastings**

Chief Financial Officer



**Michael J. Sofia, PhD**

Chief Scientific Officer

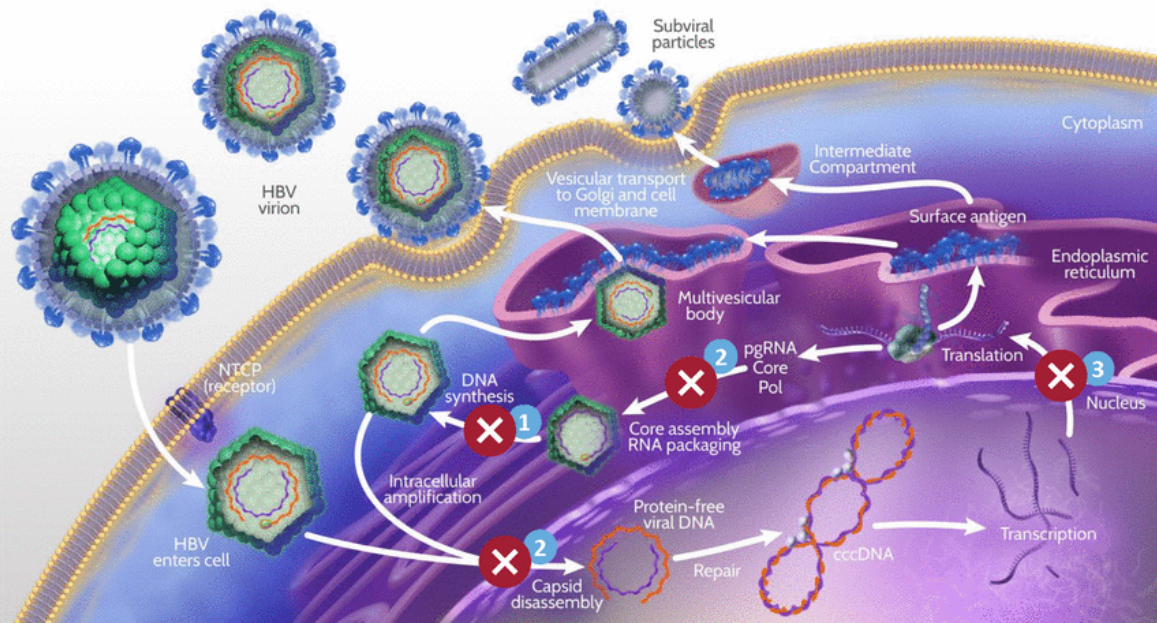




# HBV Lifecycle Illustrates Key Points for Intervention

A combination of agents with complementary MOA **is needed to cure HBV**

- 1 – NA
- 2 – AB-506
- 3 – AB-729
- 3 – RNA destabilizer



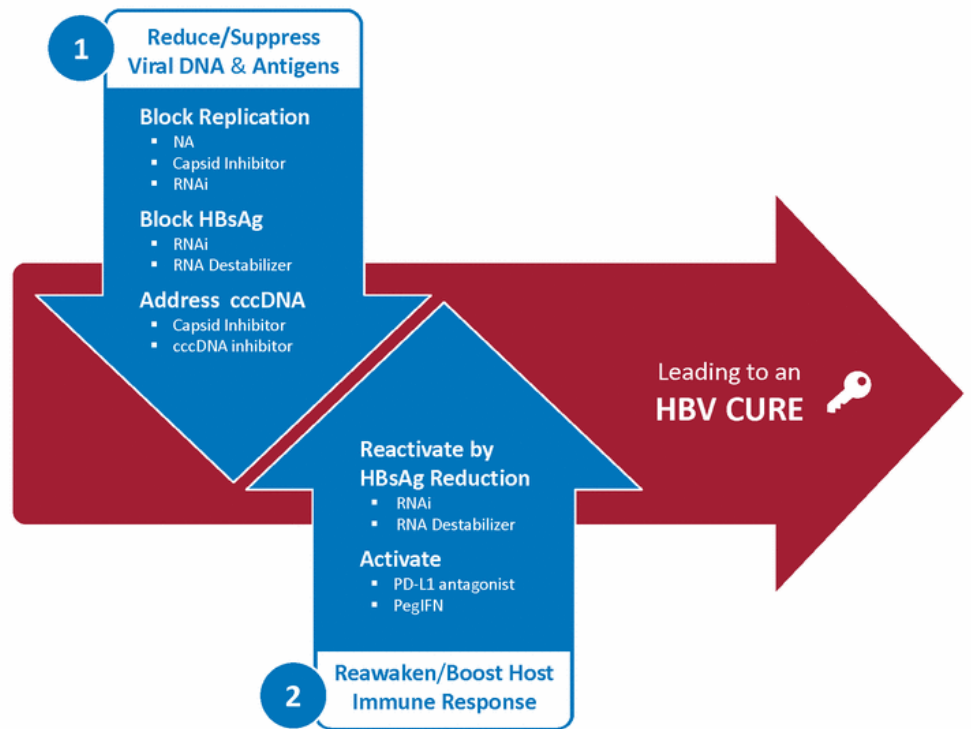


# Keys to Therapeutic Success

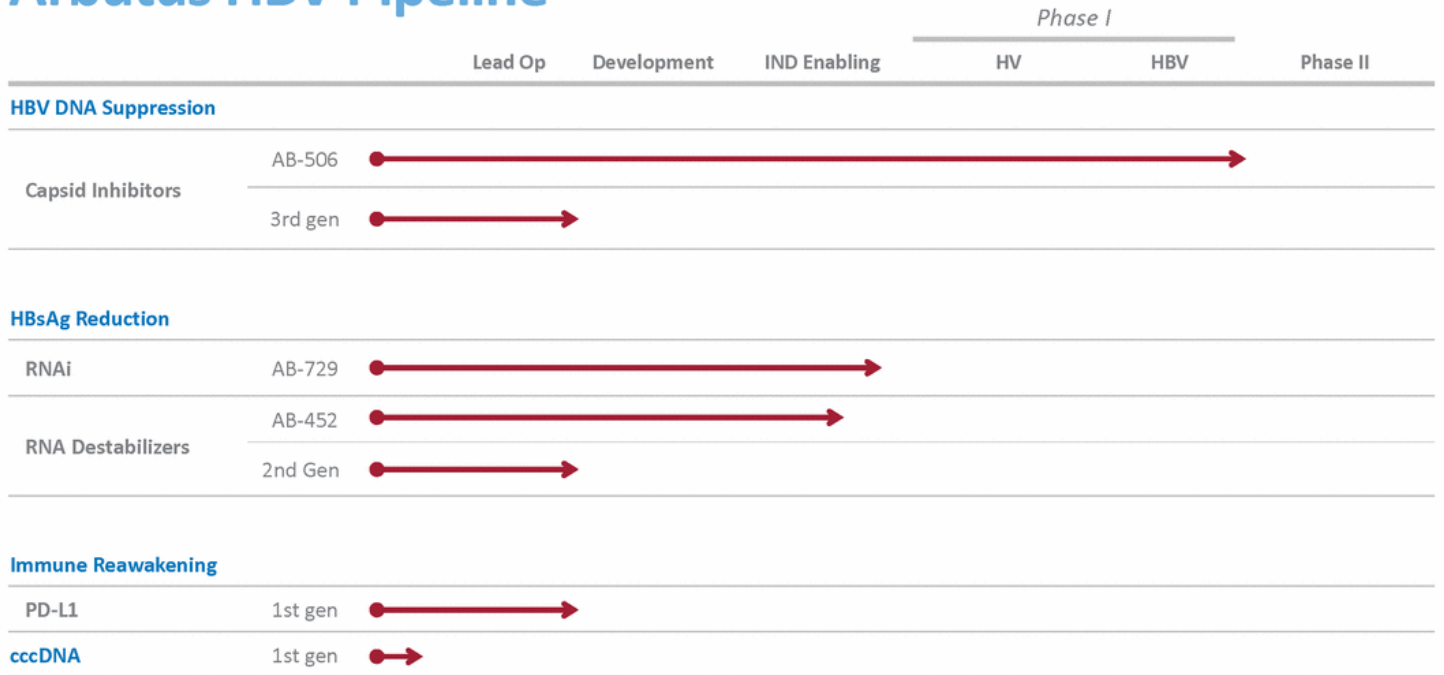
Suppress HBV DNA and viral antigens

Reawaken host immune response

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

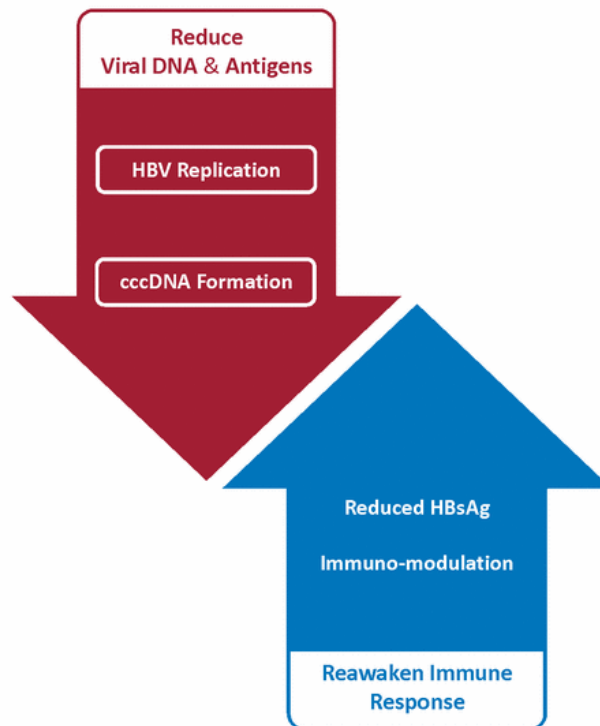


# Arbutus HBV Pipeline



# Capsid Inhibitor: Blocking HBV Replication

Driving HBV DNA to undetectable, in the serum **and in the liver** is a key to therapeutic success in HBV



# AB-506 – Capsid Inhibitor

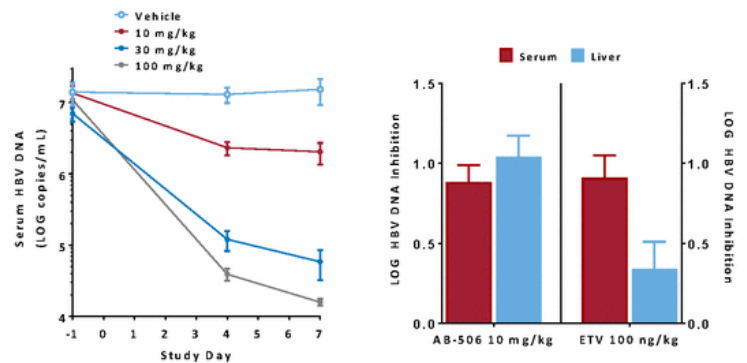
AB-506 shows **preclinical potency and PK profile** consistent with best in class agents

- Active against all genotypes & NA resistant variants
- Once daily dosing
- Complementary with HBsAg reducing agents

## Clinical Development

- Phase 1a / 1b – topline data first two cohorts July '19
  - Additional dosing cohorts in combination w/ NA 2h '19
- Phase 2 initiation Q4'19, to support and inform combination regimen:
  - Dose finding (w/ NA)
  - Establish long term safety (w/ NA)
  - Determine long term impact on DNA, cccDNA / HBsAg suppression
- Inclusion with AB-729 in a combination regimen 2020

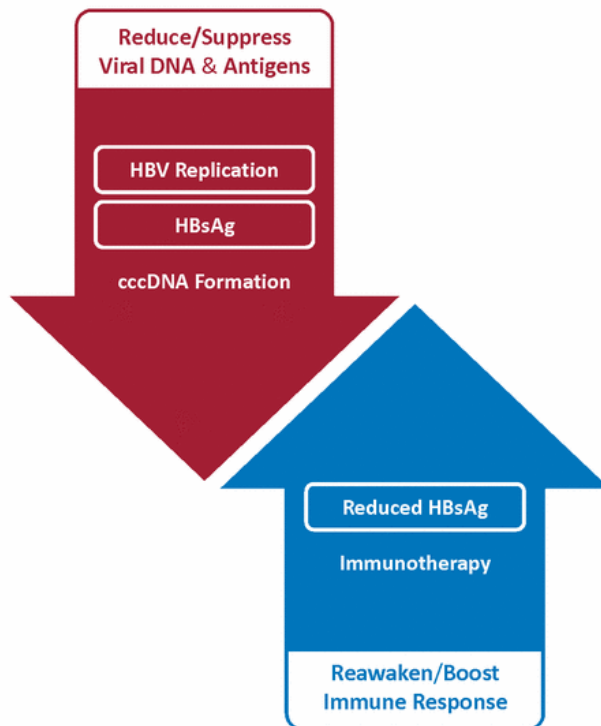
## AB-506 Potently Reduces HBV DNA in Serum and Inhibits Liver HBV DNA more than ETV



*In vivo* antiviral activity of AB-506. A) Reduction in serum HBV DNA is dose responsive following AB-506 administration. B) AB-506 surpassed ETV at inhibiting liver HBV DNA, at dosages where the serum HBV DNA inhibition was equivalent (data relative to vehicle at Day 7)

# Driving Down HBsAg Is A Key to Therapeutic Success in HBV

- HBsAg is responsible for immune exhaustion
- Replication inhibitors do not block HBsAg production



# 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

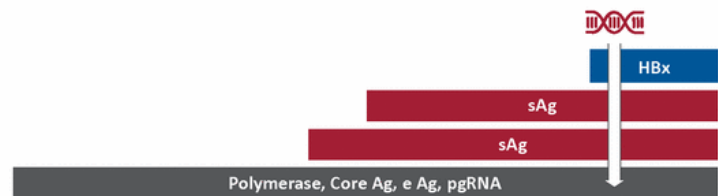
- Potent HBsAg reduction in preclinical models

Pan-genotypic activity across HBV genotypes

**Duration of HBsAg reduction supports once per month dosing**

Demonstrated complementarity with capsid inhibitors

**“IND” enabling studies complete, CTA filed in several countries**



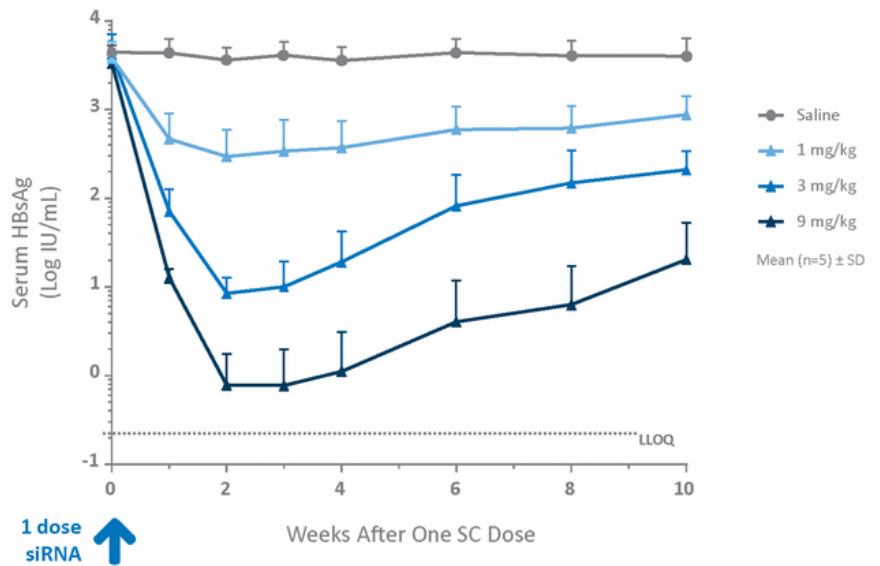
# AB-729

## In Vivo Single Dose Response & Duration

Clear dose response in AAV mouse model

Achieves maximum **HBsAg reduction** possible in this model

Duration supports a clinical dosing frequency of **once per month**

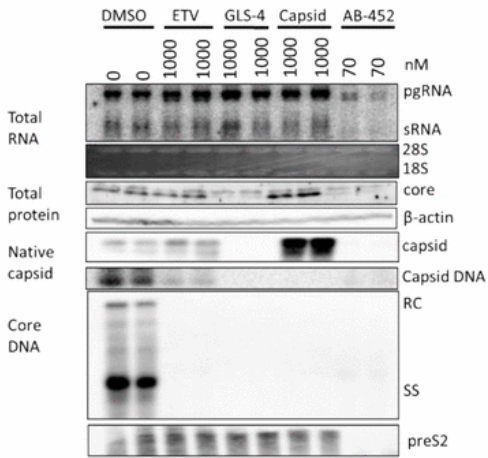


AB-729 also reduces HBV RNA, HBV DNA and e-antigen

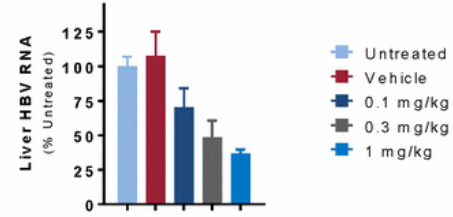
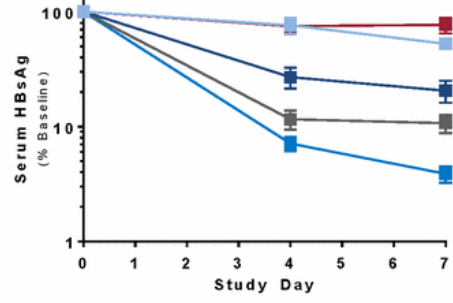


# Small Molecule HBV RNA Destabilizers

HBV RNA reduction leads to interference in viral gene expression, DNA replication, and virion assembly



AAV mouse model  
PO dosing



- Dose-dependent reduction in HBsAg
- HBsAg reduction correlates with reductions in liver HBV RNAs

# AB-452 and RNA Destabilizer Program

## Multiple evaluations underway to support AB-452 and RNA destabilizer program next steps

### Completed

- ✓ IND enabling studies and 28 day toxicology
- ✓ AB-452 mechanism of action studies demonstrating AB-452 causes HBV mRNA poly A tail shortening
- ✓ Host protein knock out causes no cellular tox
- ✓ Host gene expression studies indicating that AB-452 has no detectable effect on host cell mRNAs

### Ongoing

- *In vitro* target engagement and target-based cell viability evaluations
- Additional, specialized *in vitro* and *in vivo* non-clinical safety assessments
- In depth DMPK evaluations
- 90 day toxicology studies, two species

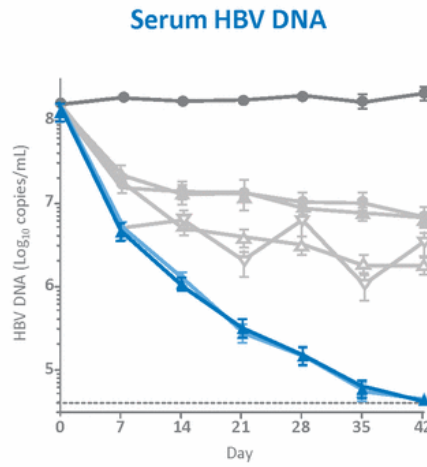
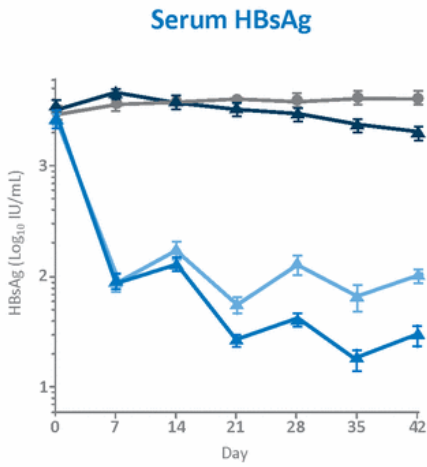
Multiple small molecule chemotypes under investigation to **maximize program opportunity**

Anticipated go/no go decision for AB-452 clinical development in **early 2020**

**2<sup>nd</sup> gen compound nomination expected 4Q '19**

# Preclinical Combination In Humanized Mouse Model

RNAi + Capsid inhibitor containing regimens result in HBV DNA and HBsAg reductions



## Treatment for 6 weeks

	Dosage	Route	Frequency
Capsid Inhibitor	100 mg/kg	PO	BID
ETV	1.2 µg/kg	PO	QD
PegIFN	30 µg/kg	SQ	2×/wk
RNAi	3 mg/kg	IV	biweekly

## Key

- RNAi + Capsid Inhibitor + ETV
- RNAi + Capsid Inhibitor + PegIFN
- Vehicle
- Capsid Inhibitor + PegIFN

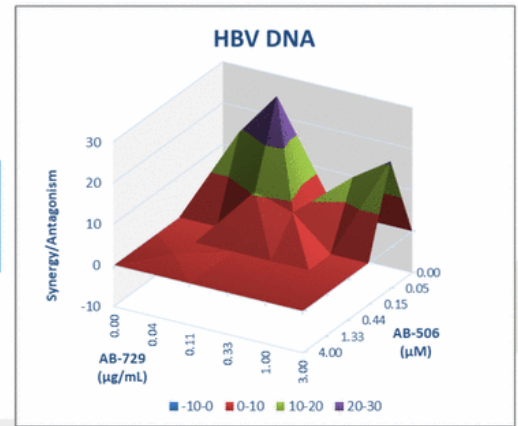
# Drug Combination Analysis of AB-506 + AB-729

Capsid Inhibitor + Antigen Inhibitor

Assayed Marker	Inhibitor A	Inhibitor A EC <sub>50</sub>	AB-729 EC <sub>50</sub> (µg/mL)	Synergy Volume (%)	Antagonism Volume (%)	Conclusion
HBV-DNA	TAF (µM)	0.08	<0.12	88.42, 2.46	-1.1, -2.33	Additive to Moderate Synergy
HBsAg		4.12	<0.12	0, 0	-2.46, -1.74	Additive
HBV-DNA	PegIFN- alpha2a (IU/mL)	1.19	<0.12	0, 8.59	-15.53, -0.19	Additive
HBsAg		12.91	<0.12	0, 0.02	0, -2.74	Additive
HBV-DNA	AB-506 (µM)	0.08	<0.12	106.05, 17.24	0, 0	Additive to Strong Synergy
HBsAg		>4.00	<0.12	2.33, 0	0, 0	Additive
HBV-DNA	AB-452 (µM)	0.01	<0.12	45.01, 4.55	0, 0	Additive to Minor Synergy
HBsAg		0.01	<0.12	0, 0	-22.78, -16.16	Additive

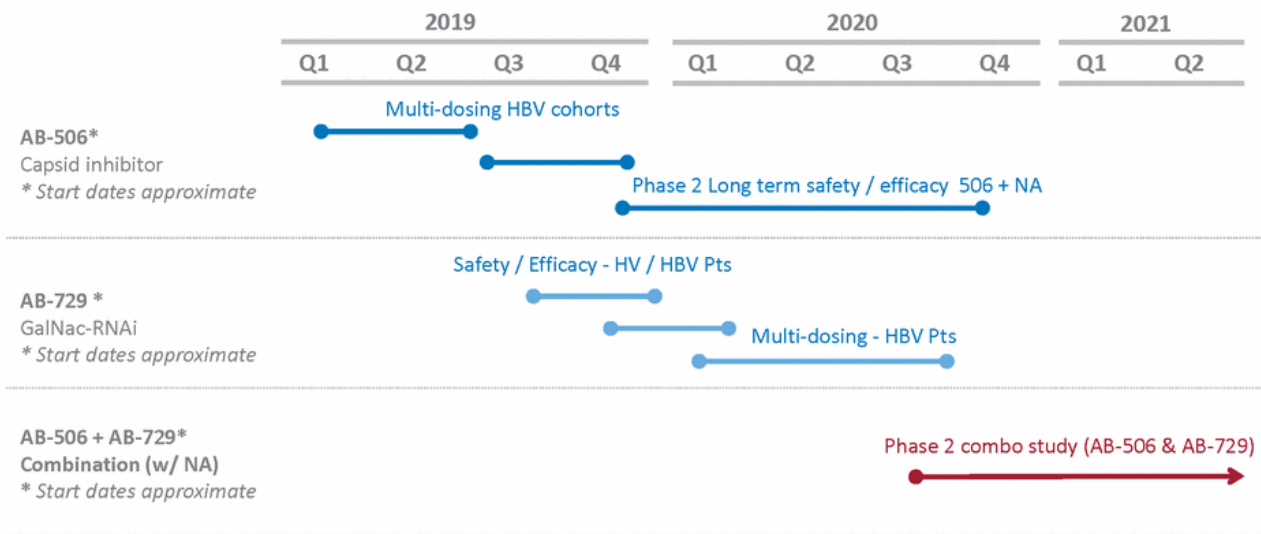
HBV-infected primary human hepatocytes

Interpretive guidelines as per Prichard & Shipman 1990



# Potential Path to a **Combination HBV Cure**

Drive to undetectable HBV DNA and HBsAg



# Key Catalysts for 2019 - 2020

2H 2019

**AB-729**

Initiation  
of Phase  
1 study

**AB-506**

Top line  
Phase  
1a/1b data

**AB-506**

Additional  
multi-dosing  
cohorts

**AB-506**

CTA filing to  
Initiate  
Phase 2  
study

2020

**AB-729**

Top line  
Single-dose  
HBV data

**AB-729**

Top line multi-  
dose HBV data

**Combo Study**

AB-729 +AB-  
506  
w/ NA in HBV  
pts