Arbutus BIOPHARMA

Curing Chronic Hepatitis B

AB-729-001 60mg Week 12 Results

May 18, 2020

NASDAQ: ABUS www.arbutusbio.com

Forward Looking Statements

This presentation 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 presentation include statements about our expectations regarding the timing and clinical development of our product candidates, including the anticipated release of preliminary data for multiple-dose and additional single-dose cohorts in our Phase 1a/1b clinical trial for AB-729 in the second half of 2020; and the potential for our drug candidates to improve upon the standard of care and contribute to a curative combination regimen for chronic HBV.

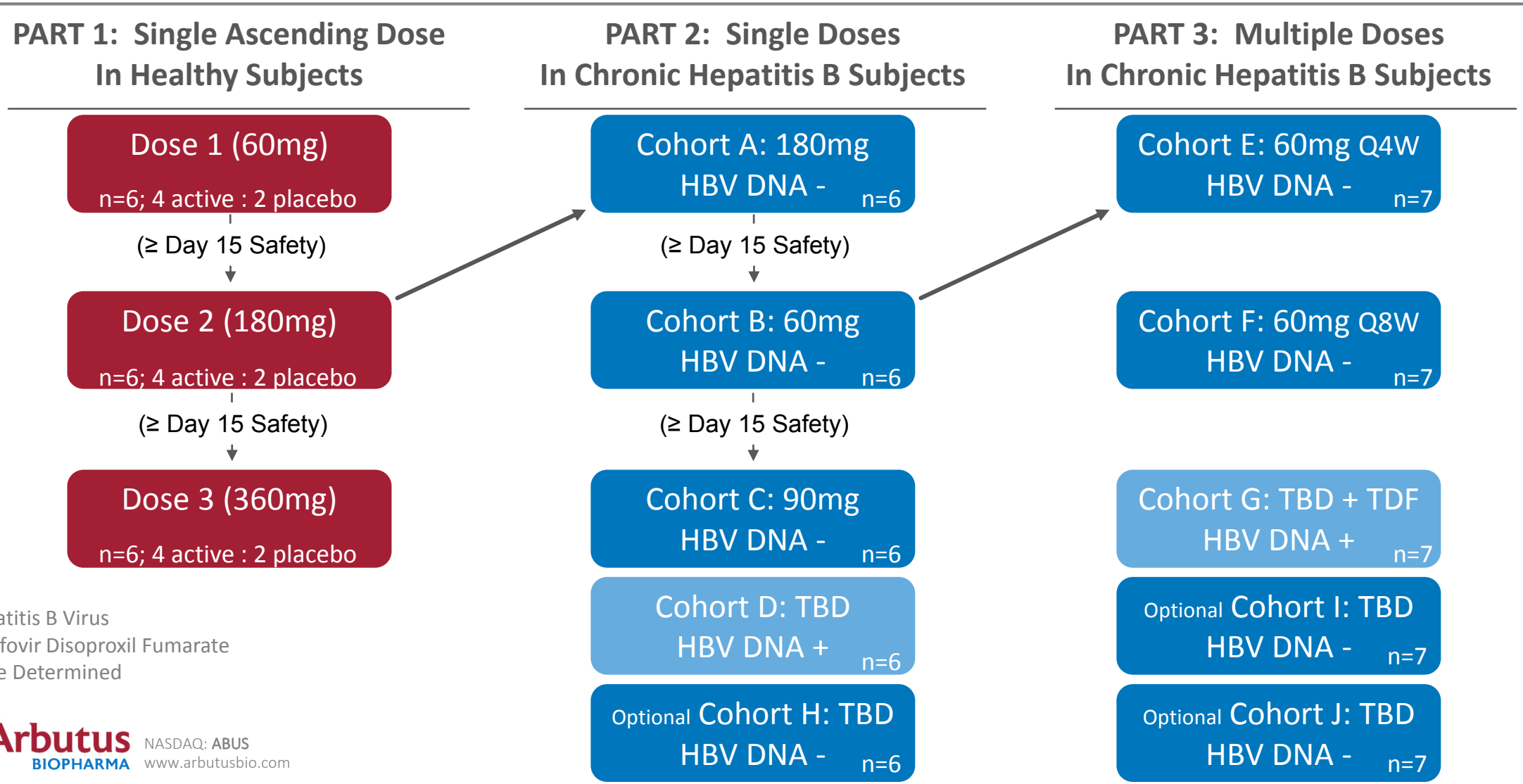
With respect to the forward-looking statements contained in this presentation, Arbutus has made numerous assumptions regarding, among other things: the effectiveness and timeliness of preclinical studies and clinical trials, and the usefulness of the data; the timeliness of regulatory approvals; the 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.

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 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; market shifts may require a change in strategic focus; and the ongoing COVID-19 pandemic could significantly disrupt our 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.

COVID-19. In December 2019 an outbreak of a novel strain of coronavirus (COVID-19) was identified in Wuhan, China. This virus continues to spread globally, has been declared a pandemic by the World Health Organization and has spread to nearly every country in the world. The impact of this pandemic has been, and will likely continue to be, extensive in many aspects of society. The pandemic has resulted in and will likely continue to result in significant disruptions to businesses. A number of countries and other jurisdictions around the world have implemented extreme measures to try and slow the spread of the virus. These measures include the closing of businesses and requiring people to stay in their homes, the latter of which raises uncertainty regarding the ability to travel to hospitals in order to participate in clinical trials. Additional measures that have had, and will likely continue to have, a major impact on clinical development, at least in the near-term, include shortages and delays in the supply chain, and prohibitions in certain countries on enrolling subjects in new clinical trials (e.g. in Australia). It is not possible to predict if the COVID-19 pandemic will negatively impact our plans and timelines.

AB-729-001 Study Design



HBV: Hepatitis B Virus
TDF: Tenofovir Disoproxil Fumarate
TBD: To Be Determined

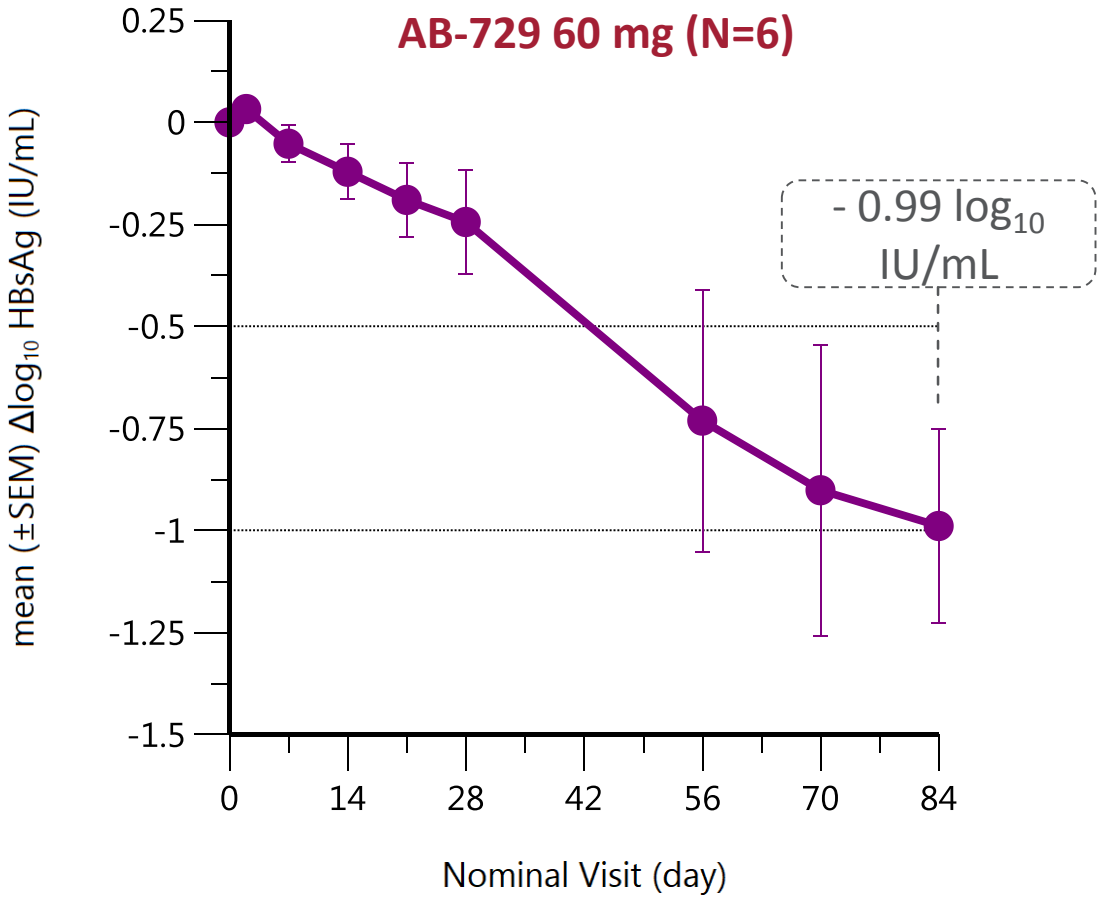
AB-729-001 Key Inclusion/Exclusion Criteria

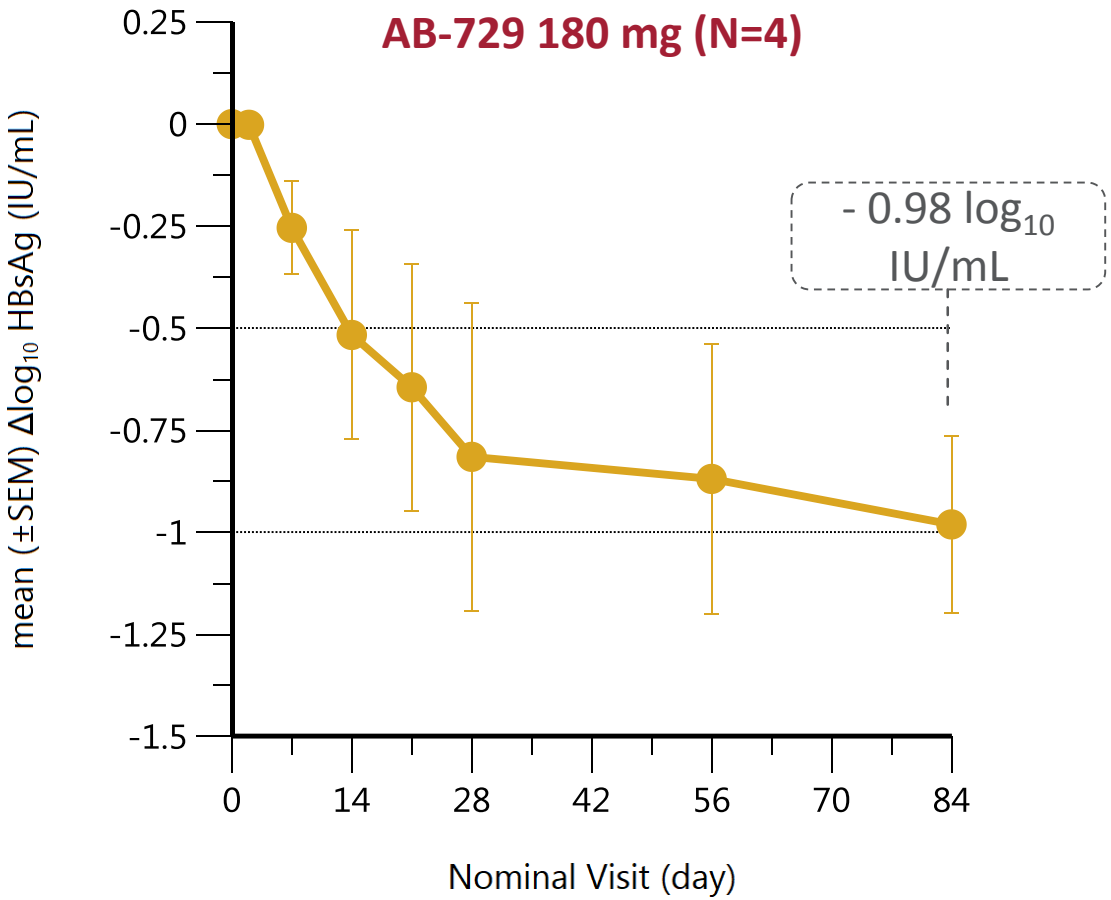
1. Documented chronic hepatitis B infection; confirmed HBeAg positive or negative
2. HBV-DNA at screening:
   a) For HBV-DNA negative subjects (on a NA for at least 6 months): HBV-DNA <LLOQ
   b) For HBV-DNA positive subjects: HBV-DNA ≥1,000 IU/mL
3. HBsAg ≥250 IU/mL at screening
4. Non-cirrhotic with mild/moderate fibrosis defined by:
   a) Liver biopsy Metavir Fibrosis Score of F0-2 (or equivalent) within 12 months OR Fibroscan® result of ≤10 kPa within 6 months
5. ALT/AST <5x ULN for Part 2 and <2x ULN for Part 3; Tbili <1.5x ULN for all Parts

AB-729-001 Chronic Hepatitis B Subject Demographics

	Cohort A: 180mg (n=4)	Cohort B: 60mg (n=6)
Age (mean, range)	42.8 (35-53)	48.2 (33-56)
Male Gender (n, percentage)	3 (75%)	3 (50%)
Asian Race (n, percentage)	0 (0%)	3 (50%)
Hepatitis B e-Antigen Negative (n, percentage)	3 (75%)	6 (100%)
Baseline Hepatitis B Surface Antigen (mean, range)	8,577 (4,720 - 10,289) IU/mL	2,095 (405 – 5,110) IU/mL

Continuous Mean HBsAg Decline of ~1 log_{10} with a Single 60 mg Dose Matching HBsAg Decline of 180 mg at Week 12

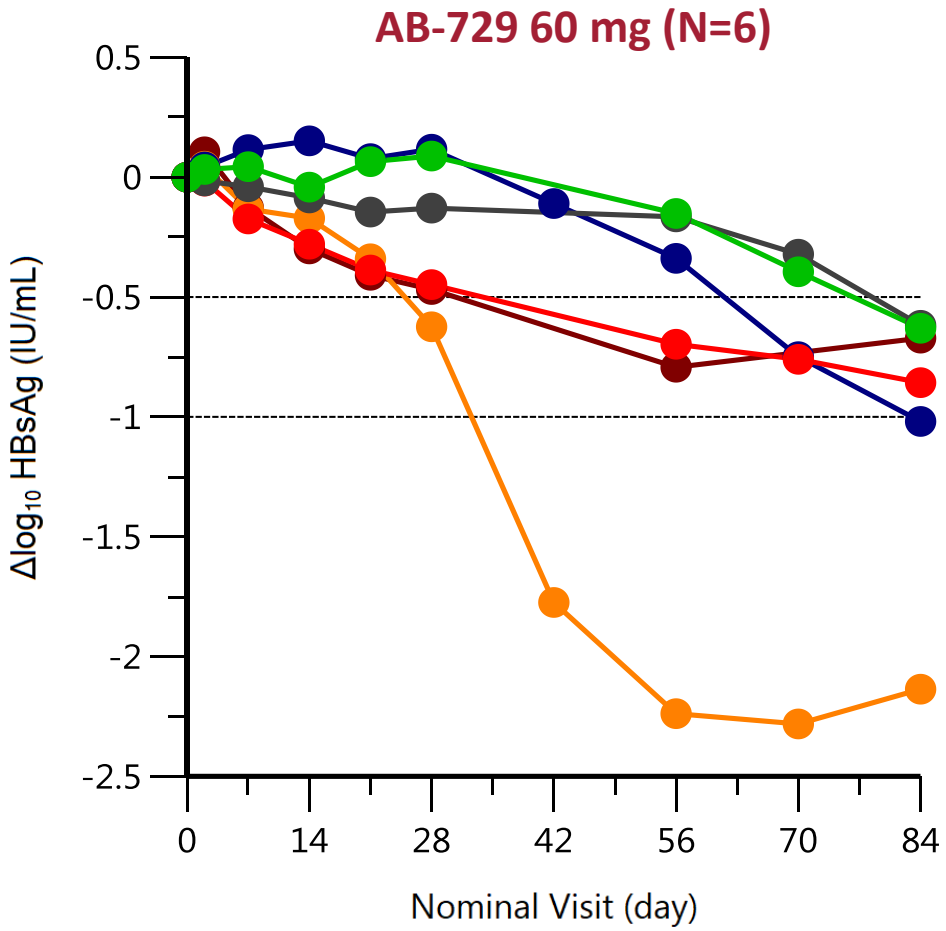


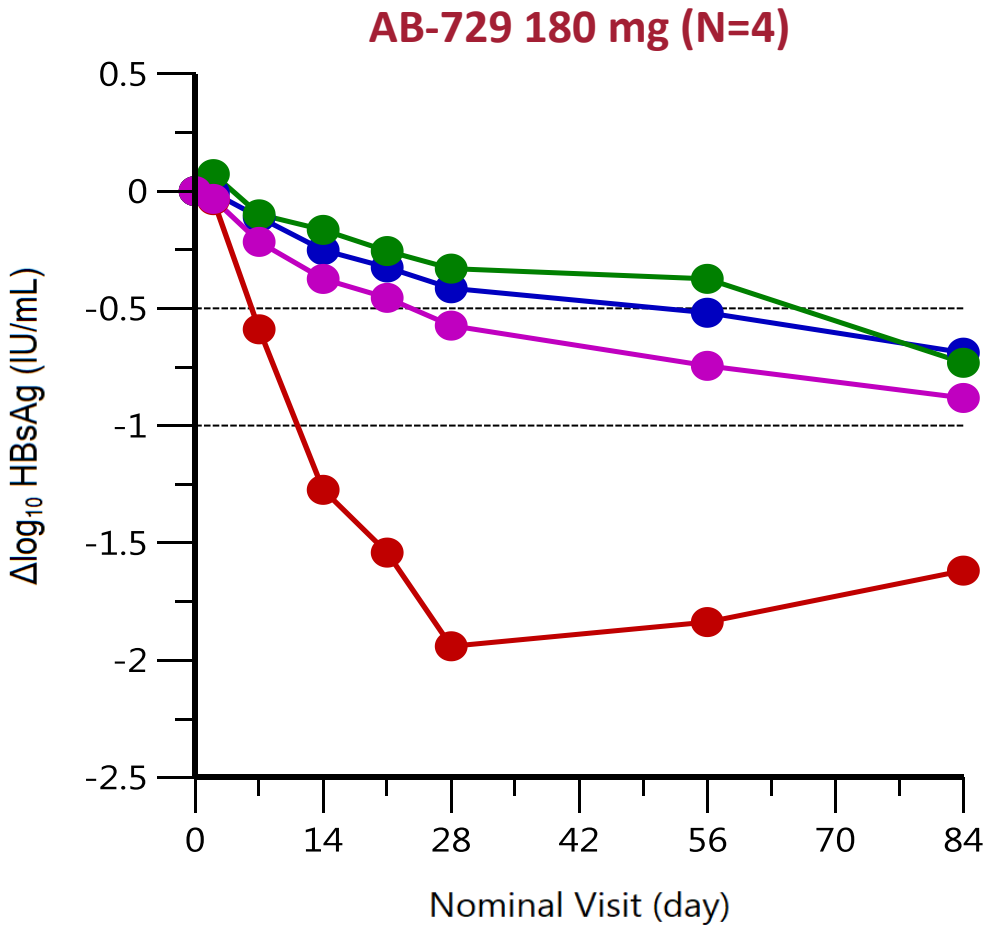


60 mg week 6 data (N=2) excluded for consistency as Week 6 not collected in 180 mg cohort

All Subjects Responded in the 60mg Single-Dose Cohort

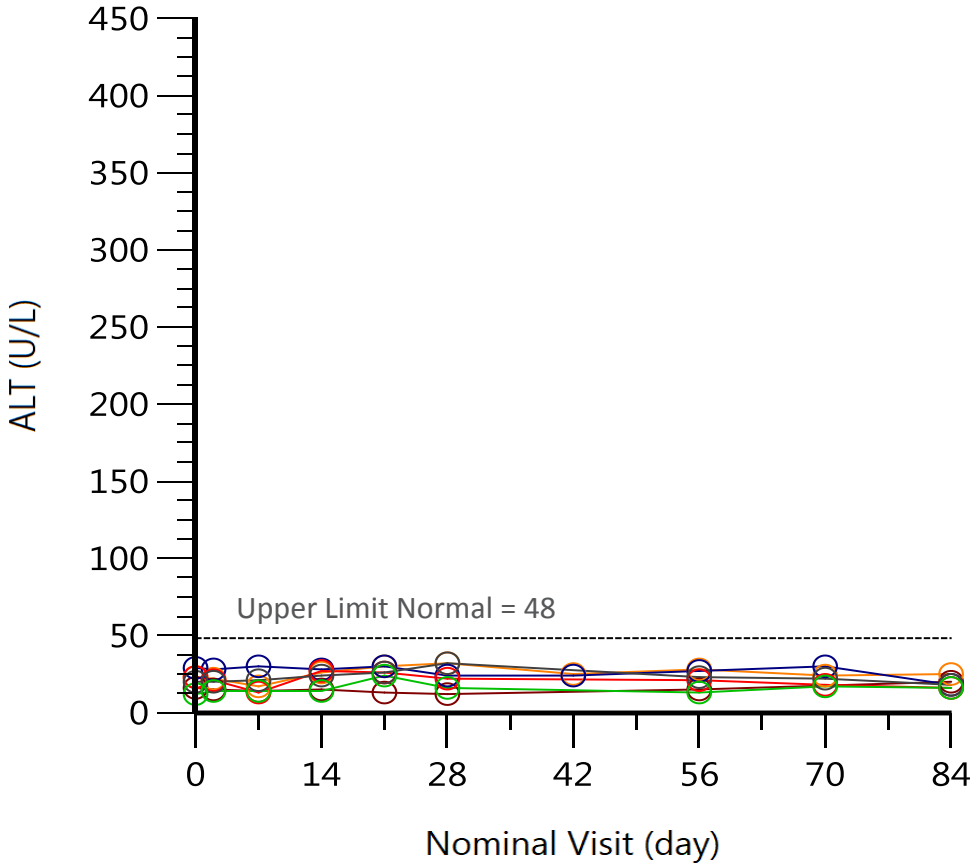
Minimum HBsAg decline of -0.62 log10 and maximum HBsAg decline of -2.14 log10 at week 12



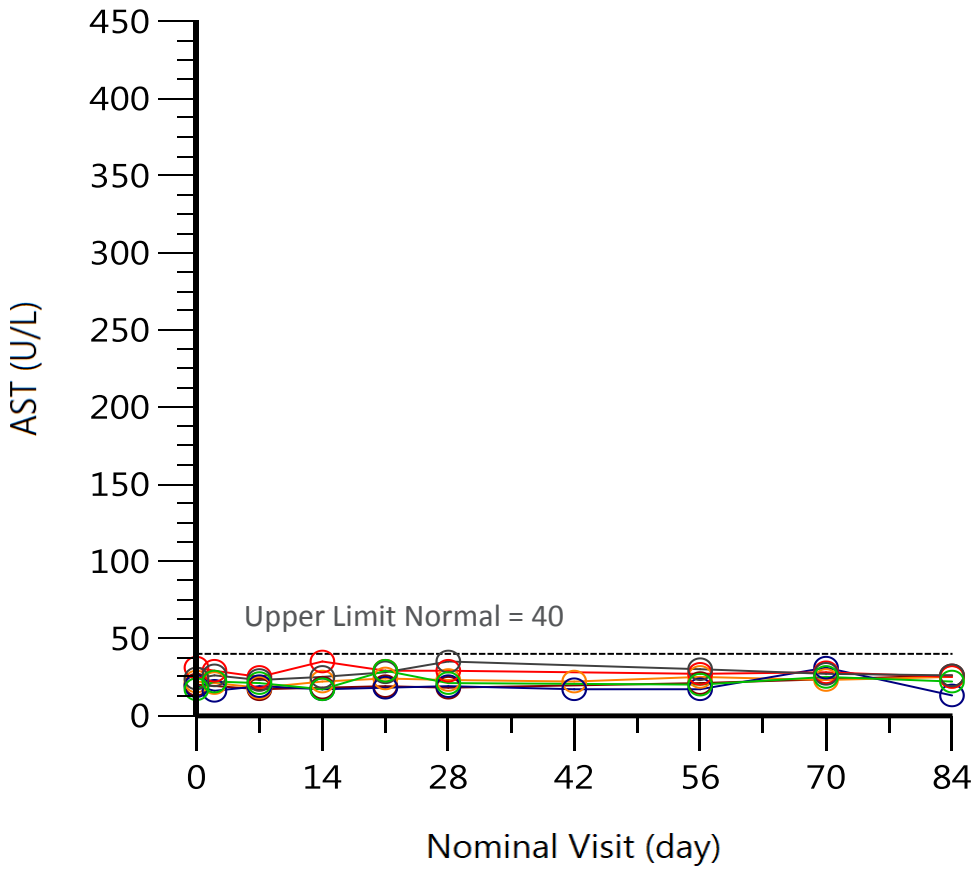


AB-729 60mg Single-dose Generally Safe and Well Tolerated with Normal ALT/AST Through 12 Weeks

Alanine Aminotransferase



Aspartate Aminotransferase



Samples from week 8 and week 12 from one subject collected by local lab where Upper Limit Normal = 34 U/L for both ALT and AST

AB-729 Next Steps

Cohort	Status	Preliminary Data Anticipated
60 mg multi-dose (Dose Interval = 4 weeks)	Ongoing	2H 2020
60 mg multi-dose (Dose Interval = 8 weeks)	Initiate ASAP	2H 2020
90 mg single-dose	Ongoing	2H 2020

Q&A