VBI VACCINES

ACTIVATING THE POWER WITHIN

Hepatitis B Portfolio Fireside Chat

Led by Raymond James' Analyst, Steven Seedhouse, Ph.D.

NASDAQ : VBIV

February 28, 2023

Forward-Looking & Safe Harbor Statements

Certain statements in this presentation that are forward-looking and not statements of historical fact are forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and are forward-looking information within the meaning of Canadian securities laws (collectively "forward-looking statements").

The Company cautions that such statements involve risks and uncertainties that may materially affect the Company's results of operations. Such forward-looking statements are based on the beliefs of management as well as assumptions made by and information currently available to management.

Actual results could differ materially from those contemplated by the forward-looking statements as a result of certain factors, including but not limited to, the impact of general economic, industry or political conditions in the United States or internationally; the impact of the COVID-19 pandemic and the continuing effects of the COVID-19 pandemic on our clinical studies, manufacturing, business plan, and the global economy; the ability to successfully manufacture and commercialize PreHevbrio/PreHevbri; the ability to establish that potential products are efficacious or safe in preclinical or clinical trials; the ability to establish or maintain collaborations on the development of pipeline candidates and the commercialization of PreHevbrio/PreHevbri; the ability to obtain appropriate or necessary regulatory approvals to market potential products; the ability to obtain future funding for developmental products and working capital and to obtain such funding on commercially reasonable terms; the Company's ability to manufacture product candidates on a commercial scale or in collaborations with third parties; changes in the size and nature of competitors; the ability to retain key executives and scientists; and the ability to secure and enforce legal rights related to the Company's products.

A discussion of these and other factors, including risks and uncertainties with respect to the Company, is set forth in the Company's filings with the SEC and the Canadian securities authorities, including its Annual Report on Form 10-K filed with the SEC on March 7, 2022, and filed with the Canadian security authorities at sedar.com on March 7, 2022, as may be supplemented or amended by the Company's Quarterly Reports on Form 10-Q.

Given these risks, uncertainties and factors, you are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by this cautionary statement.

All such forward-looking statements made herein are based on our current expectations and we undertake no duty or obligation to update or revise any forward-looking statements for any reason, except as required by law.

About VBI Vaccines

VBI Vaccines is a global biotechnology company driven by immunology in the pursuit of powerful prevention and treatment of disease

Our product…

PreHevbrio™
Hepatitis B Vaccine (Recombinant)

Approved by the FDA on November 30, 2021

Our pipeline…

… includes lead prophylactic and therapeutic candidates that target:

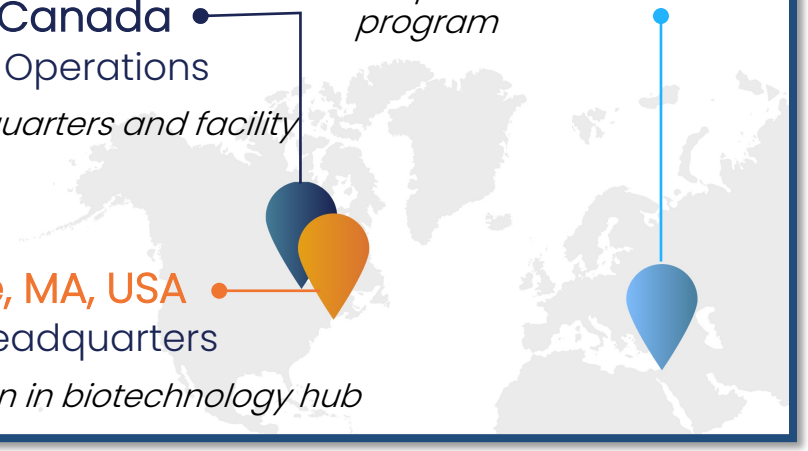
- Hepatitis B
- Glioblastoma (GBM)
- COVID-19
- Cytomegalovirus (CMV)

Our locations…

Rehovot, Israel
Manufacturing Facility
Fully-owned GMP manufacturing facility for the production of HBV program

Ottawa, Canada
Research Operations
R&D headquarters and facility

Cambridge, MA, USA
Corporate Headquarters
Central location in biotechnology hub

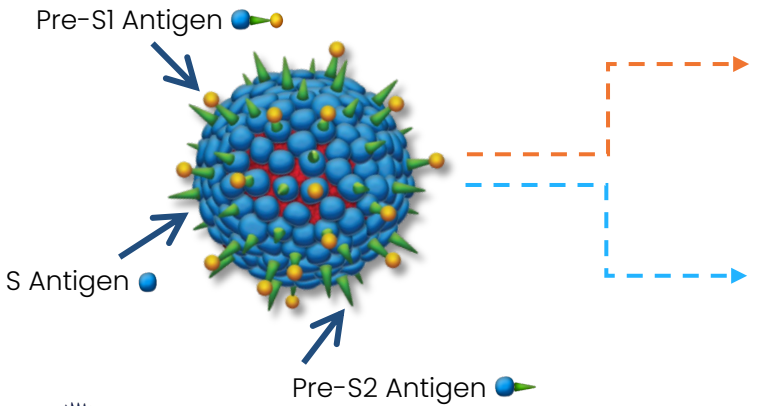


VBI's Pipeline : Comprehensive Approach to HBV

VBI's broad spectrum of vaccine and immunotherapeutic candidates are designed to power the immune system to prevent and treat disease

Hepatitis B Programs

Program	Preclinical	Phase 1	Phase 2	Phase 3	Registration/ Commercial
Approved Prophylactic Vaccine: PreHevbrio[1,2,3,4] Hepatitis B Vaccine (Recombinant)					
Treatment Candidate: VBI-2601 (BRII-179)					



- PreHevbrio, the only 3-antigen HBV vaccine, is scientifically differentiated from other HBV vaccines – expressing the three hepatitis B surface antigens (S, pre-S1, and pre-S2), and manufactured in mammalian cells (vs. yeast)
- VBI-2601, an HBV immunotherapeutic candidate, builds upon PreHevbrio's 3-antigen conformation, but has been reformulated to enhance B and T cell responses and break HBV tolerance/immunosuppression

[1]Approved for use in the U.S. for the prevention of infection caused by all known subtypes of hepatitis B virus in adults 18 years of age and older
[2]Approved for use in Israel, under the brand name Sci-B-Vac®, for active immunization against hepatitis B virus (HBV) infection
[3]Approved for use in the E.U., EEA, and U.K. under the brand name PreHevbri™ [Hepatitis B vaccine (recombinant, adsorbed)] for active immunisation against infection caused by all known subtypes of the hepatitis B virus in adults
[4]Approved for use in Canada for active immunization against infection caused by all known subtypes of hepatitis B virus in adults 18 years of age and older

Hepatitis B Remains a Persistent Public Health Problem

HBV infection is the most common blood-borne infection, with an estimated 240M-350M chronically-infected individuals worldwide

U.S. & Europe : HBV Disease Burden and Challenges

Suboptimal surveillance results in under-representation of true disease burden

No. of chronically-infected adults:

- 2018 U.S. surveillance data estimates 862,000 adults, but may be as high as 2.2 million[1]
- European estimates report ~5 million are chronically infected[2]
- Over 290 million adults estimated to be infected with cHBV worldwide[3]

Acute HBV disease rates have increased in recent years

- U.S. acute HBV Adult Infections increased 11% from 2014-2018[4]
- In Europe, the highest rate of acute infections is among 35–44-year-olds[5]

Low awareness of infection status leads to increased risk of transmission

- 68% of chronically-infected adults in the U.S. are unaware of their infection status[6]
- A recent ECDC survey showed proportion of undiagnosed infections range between 45%-85%[2]

Adult vaccination rates remain persistently low

- The 2018 reported U.S. HBV vaccination rate for adults age 19+ was only 30.0%, leaving almost 200 million unprotected adults[7]

Sources: [1]HHS Viral Hepatitis in the United States: Data and Trends. [2]ECDC: Around 9 Million Europeans are Affected By Chronic Hepatitis B or C. European Centre for Disease Prevention and Control, July 26, 2017. [3]World Health Organization: Hepatitis B Fact Sheet. [4]HHS Viral Hepatitis National Strategic Plan for the United States: A Roadmap to Elimination (2021-2025). [5]ECDC: Hepatitis B – Annual Epidemiological Report for 2017, Jun 17 2019. [6]Hepatitis B Basic Information – U.S. Department of Health & Human Services, August 2020. [7]ACIP Evidence to Recommendations for a Universal Hepatitis B (HepB) Vaccination Strategy in Adults, National Center for Immunization and Respiratory Disease, 2021. Centers for Disease Control and Prevention.

Public Health Bodies are Changing Tactics, Bringing Renewed Prioritization in the Fight to Eliminate HBV

Changing U.S. Adult HBV Vaccination Guidelines

- In November 2021, the CDC's Advisory Committee on Immunization Practices (ACIP) unanimously voted to move from a risk-based HBV adult vaccination recommendation to a universal recommendation for adults aged 19-59 years
    - A risk-based recommendation remains for adults age 60+
- April 2022 MMWR publication detailed new guidelines and PreHevbrio's inclusion into the list of recommended products for adult prophylactic HBV vaccination

Public Health Action Plans for Elimination of Hepatitis B

- Both Healthy People 2020 & the Viral Hepatitis Strategic Plan 2021-2025 include notable targets to:
    - Reduce the rate of acute HBV infection
    - Increase infection awareness
    - Reduce the rate of HBV-related deaths
- The WHO has adopted the goal of eliminating HBV globally by 2030

VBI-2601

HBV Immunotherapeutic Candidate

Current Chronic Hepatitis B Treatment Landscape

Chronic HBV infection represents a critical unmet public health need and an opportunity for meaningful innovation to achieve a functional cure

Current standard-of-care treatments are suboptimal:	A functional cure for HBV is defined as:
• Nucleotide/nucleoside reverse transcriptase inhibitors (NRTIs) and interferon regimen **require lifelong treatment** • Studies and real-world use have shown this treatment lowers but does not fully clear the virus	• Achievement of undetectable HBV surface antigen (HBsAg) levels • Sustained suppression of HBV DNA

Source: [1]World Health Organization

VBI-2601 : Potential to be a Critical Component of a Functional Cure for Chronic HBV Infection

Scientific consensus is that a functional cure for HBV is within reach, but will likely require the use of an immunotherapeutic as part of a combination approach

A functional cure will likely require the achievement of :

1. Drive down hepatitis B virus (HBV) DNA
2. Drive down immuno-suppressive HBV S-antigen
3. Achieve long-term immunologic control

VBI-2601 has a similar conformation to PreHevbrio, but has been reformulated to enhance B and T cell responses, with the aim of restoring defective HBV-specific humoral and cellular immunity in chronic HBV patients

VBI-2601 Development Plan & Status

Studies designed & executed in partnership with Brii Biosciences

Phase 1b/2a Study
Completed in 2021

- Two-part, multi-center, controlled, dose-escalation study (n=44)
- Assessed VBI-2601 safety, tolerability, and immunologic antiviral activity in non-cirrhotic patients with chronic HBV infection
- Conducted in Australia, New Zealand, Thailand, South Korea, Hong Kong, and China

Data demonstrated that VBI-2601 induced both B cell and T cell responses and was well tolerated with no safety signals observed

ANZCTR.org.au Identifier : ACTRN12619001210167

Phase 2 Combination Study
Initiated April 2021

- First-in-class study to evaluate safety and efficacy of VBI-2601 in combination with an HBV-targeting siRNA (VIR-2218)
- Multi-center study to be conducted in Australia, New Zealand, Thailand, South Korea, Hong Kong, China, Singapore, and Taiwan
- Expected enrollment of ~135 adults aged 18-60 years with chronic HBV infection
- Interim topline Phase 2 data presented February 2023 at APASL

ClinicalTrials.gov Identifier : NCT04749368

Phase 2a/2b "Add-On" Study to Standard-of-Care
Initiated December 2021

- Two-part Phase 2 study designed to evaluate the clinical effect of adding VBI-2601 to existing standard of care therapy (PEG-IFN-α and Nrtl) in non-cirrhotic HBV patients
- Expected enrollment of ~600 subjects in China
- Interim topline results expected Q3 2023

ChinaDrugTrials.org.cn Identifier : CTR20213100

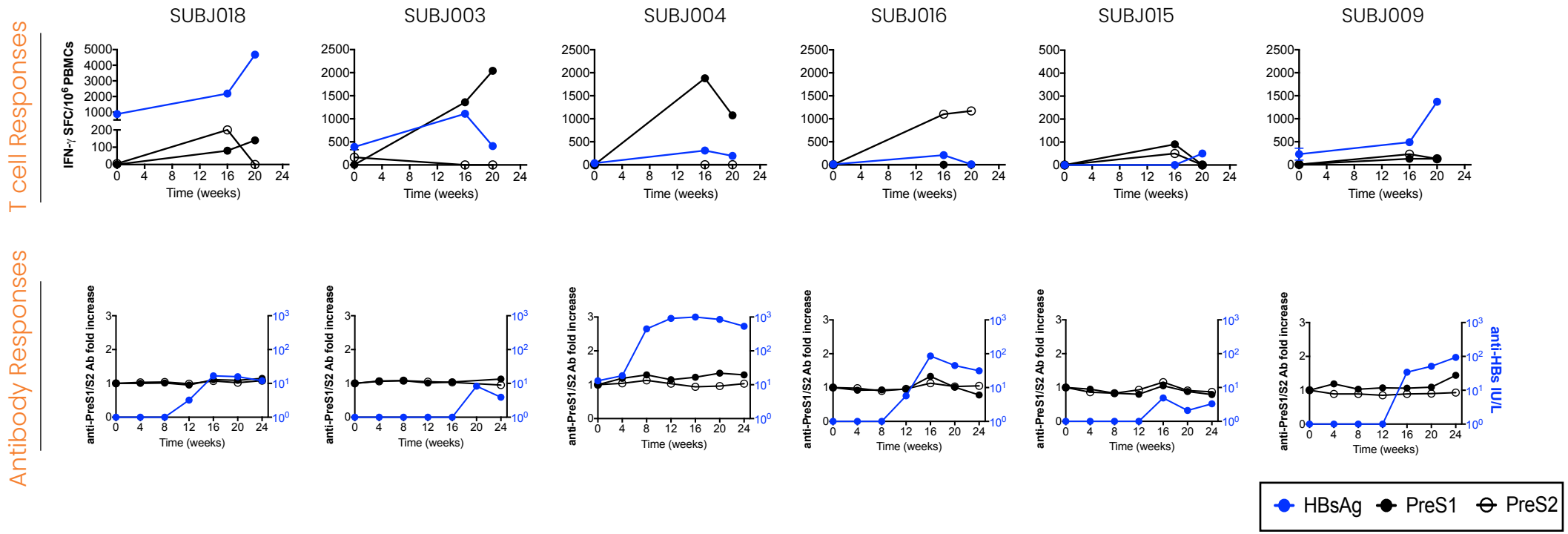
Phase 1b/2a

Proof of Mechanism : Significant Restoration of Antibody and T Cell Responses Demonstrated in Phase 1b/2a Study

Complete dataset announced at the International Liver Congress 2021

- **Potent re-stimulation of T cell responses** to HBV surface antigens (S, Pre-S1, Pre-S2) seen in **67% (Cohort B n=6/9)** and **78% (Cohort C n=7/9)** of evaluable patients in the low-dose VBI-2601 unadjuvanted and adjuvanted, respectively
- **Boosting of antibodies** to HBV surface antigens observed in **19/43 (44.2%)** of evaluable patients

VBI-2601 Unadjuvanted Data - Responders

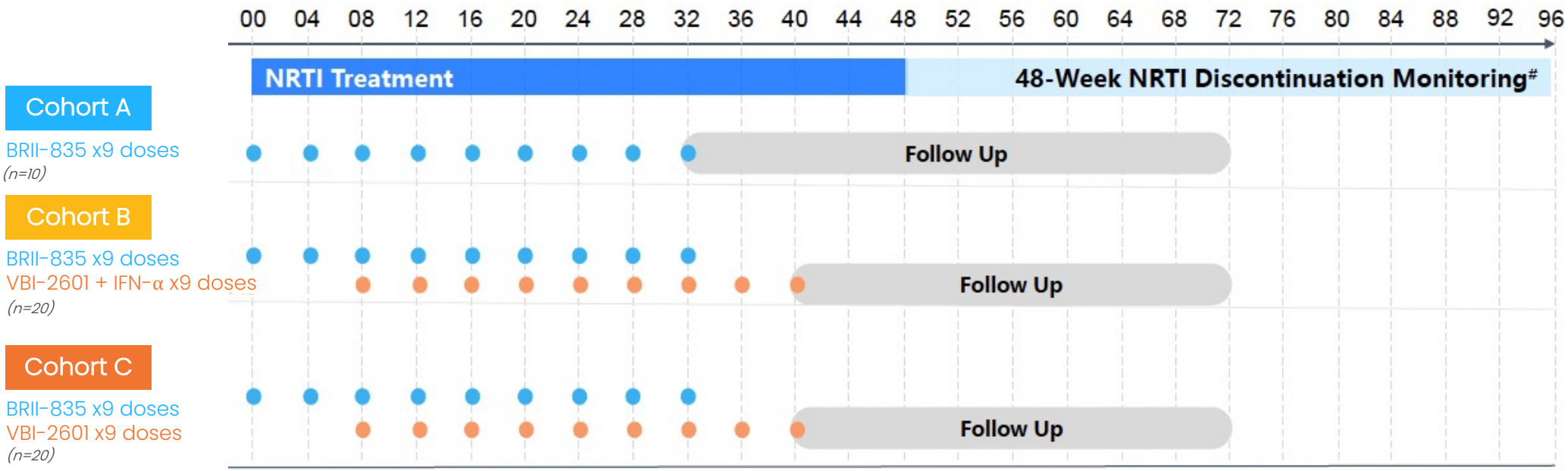


Sources: Brii Biosciences and VBI Vaccines Present Positive Data from Completed Phase 1b/2a Study on BRII-179 (VBI-2601) in Patients with Chronic Hepatitis B at the International Liver Congress 2021; June 23, 2021 (press release); additional data presented in ILC poster by Brii Bio.

Phase 2 Combo Study

Phase 2 Combination Study : Design

n=50 adult, non-cirrhotic patients who received ≥ 12 months NRTI treatment were randomized across 3 cohorts



BRII-835 100mg via subcutaneous injection (SC) | VBI-2601 (BRII-179) 40µg ± coadjuvant IFN-α 3 MIU via intramuscular injection (IM)

Participants meeting NRTI discontinuation criteria, defined as undetectable HBsAg and HBeAg, alanine aminotransferase < 2x upper limit of normal, and HBV DNA < LLOQ, will be eligible to withdraw NRTI therapy

IFN-α, interferon-alpha; LLOQ, lower limit of quantification; NRTI, nucleos(t)ide reverse transcriptase inhibitor

- Adult participants on NRTI ≥ 12 months with HBV DNA < LLOQ were enrolled
- Preliminary safety and efficacy data through Week 40 are presented

Phase 2 Combo Study

Phase 2 Combination Study : Patient Demographics

	Cohort A n=11*	Cohort B n=20	Cohort C n=20
Mean Age ± SD (years)	45.9 ± 10.5	47.6 ± 9.1	45.3 ± 9.5
Male, n (%)	8 (72.7%)	14 (70.0%)	15 (75.0%)
Race, n (%)			
Asian	11 (100%)	18 (90%)	18 (90.0%)
Black or African American	0	2 (10.0%)	1 (5.0%)
White	0	0	1 (5.0%)
HBeAg Status at Baseline, n (%)			
Negative	9 (81.8%)	15 (75.0%)	14 (70.0%)
Positive	2 (18.2%)	5 (25.0%)	6 (30.0%)
Median (Range) Baseline HBsAg (IU/mL)	387.3 (145.4, 1222.0)	694.7 (175.8, 6479.0)	832.7 (160.2, 3169.0)
Mean Baseline log_{10} HBsAg ± SD (IU/mL)	2.63 ± 0.30	2.97 ± 0.42	2.90 ± 0.35
Mean Baseline ALT ± SD (U/L)	20.3 ± 11.4	21.4 ± 9.5	21.6 ± 9.9

* One participant withdrew consent prior to study drug administration
ALT, alanine aminotransferase; HBeAg, hepatitis B virus E antigen; HBsAg, hepatitis B virus surface antigen; SD, standard deviation

- Baseline HBV S antigen (HBsAg) notably lower in Cohort A compared with baseline levels in Cohorts B and C

Phase 2 Combo Study

VBI-2601 Well Tolerated in Both Combination Cohorts

	Cohort A n=10	Cohort B n=20	Cohort C n=20
Any TEAEs	10 (100%)	19 (95.0%)	20 (100%)
Grade 1 TEAEs	10 (100%)	19 (95.0%)	17 (85.0%)
Grade 2 TEAEs	1 (10.0%)	7 (35.0%)	6 (30.0%)
≥ Grade 3 TEAEs	0	0	2 (10.0%)
BRII-835 Related TEAEs	7 (70.0%)	13 (65.0%)	10 (50.0%)
VBI-2601 (BRII-179) + IFN-α Related TEAEs	NA	17 (85.0%)	NA
VBI-2601 (BRII-179) Related TEAEs	NA	NA	10 (50.0%)
Serious TEAEs*	0	1 (5.0%)	3 (15.0%)
AEs Leading to Treatment Discontinuation#	0	0	1 (5.0%)
AEs Leading to Study Discontinuation#	0	0	1 (5.0%)
ALT Increased			
Grade 1	5 (50.0%)	6 (30.0%)	10 (50.0%)
Grade 2	0	0	0
≥ Grade 3	0	0	0
AST Increased			
Grade 1	3 (30.0%)	7 (35.%)	6 (30.0%)
Grade 2	0	1 (5.0%)	0
≥ Grade 3			
Total Bilirubin Increased			
Grade 1	0	2 (10.0%)	0
Grade 2	0	0	0
≥ Grade 3	0	0	0

- Majority of TEAEs were Grade 1 or 2 in severity; none of ≥ Grade 3 or serious TEAEs were treatment related
- Most common TEAEs across cohorts were injection site reactions (56.0%)
- TEAEs with higher incidence in Cohort B (i.e., headache, fatigue, myalgia, and pyrexia) were consistent with the known side effects of IFN-α
- Mild asymptomatic ALT and/or AST elevations were observed; mostly grade 1 in severity
- Two participants experienced borderline total bilirubin elevations (22 and 23 µmol/L, respectively); none were reported as an AE

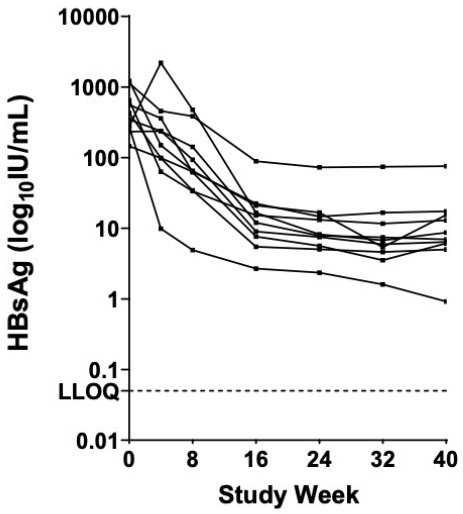
NA, not applicable; TEAE, treatment-emergent adverse event
* One chest pain (non-cardiac) in Cohort B; one each of duodenal ulcer, Ludwig's angina, and chest pain (non-cardiac) in Cohort C
# One participant experiencing duodenal ulcer withdrew study prematurely
ALT, alanine aminotransferase; AST, aspartate aminotransferase

Phase 2 Combo Study

Notable Reductions in S Antigen Seen Across Cohorts

Cohort A

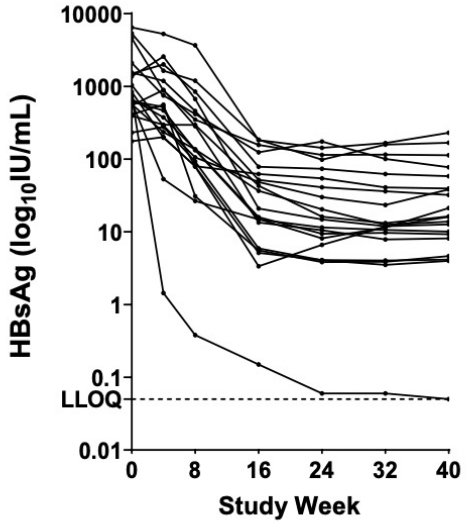
BRII-835 x9 doses



Baseline HBsAg : 387.3 IU/mL
(145.4, 1222.0)

Cohort B

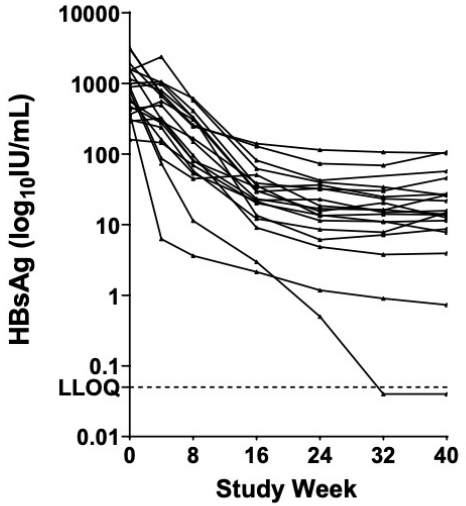
BRII-835 x9 doses
VBI-2601 + IFN-α x9 doses



Baseline HBsAg : 694.7 IU/mL
(175.8, 6479.0)

Cohort C

BRII-835 x9 doses
VBI-2601 x9 doses



Baseline HBsAg : 832.7 IU/mL
(160.2, 3169.0)

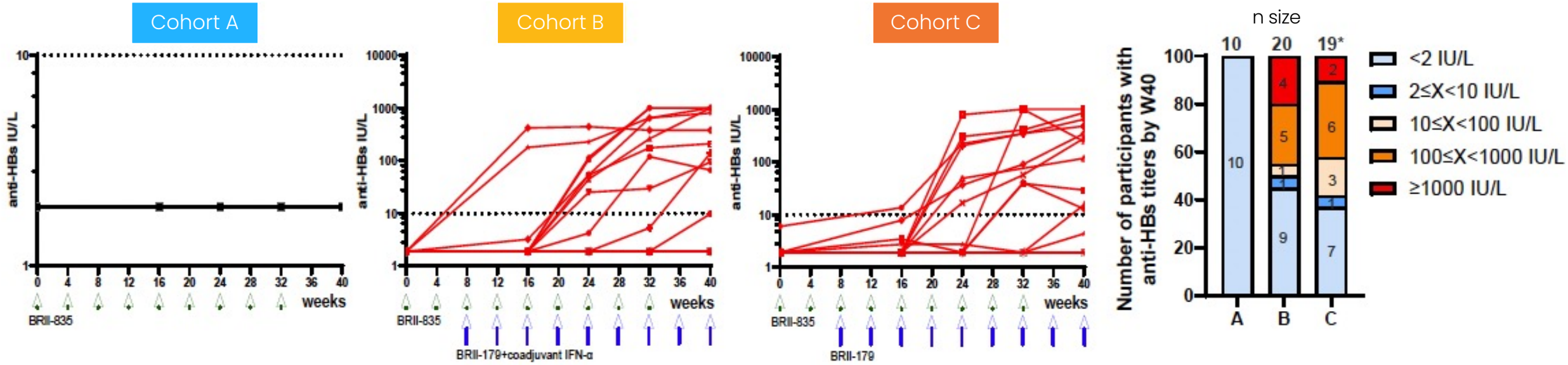
Mean (SD) Change From Baseline (log_{10} IU/mL)

	Week 32 (siRNA EOT)	Week 40 (Combo EOT)
Cohort A (n=10)	-1.75 (0.39)	
Cohort B (n=20)	-1.78 (0.58)	-1.75 (0.60)
Cohort C (n=20)	-1.81 (0.71)	-1.77 (0.72)

- Mean HBV S antigen (HBsAg) reductions from baseline were comparable across all cohorts

Phase 2 Combo Study

VBI-2601 + siRNA (BRII-835) Combination Elicited Robust Restoration of HBV Surface Antibodies

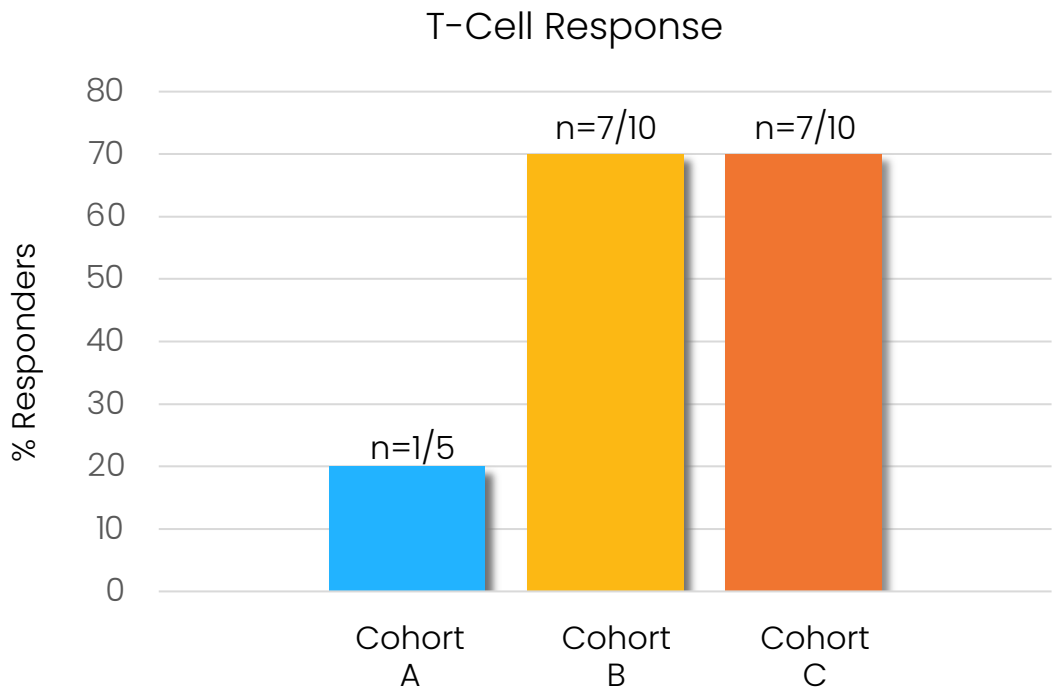


- High antibody titers ≥ 10 IU/L induced in **50% (Cohort B n=10/20)** and **58% (Cohort C n=11/19)** of patients who received combination regimen – no antibody responses were detected in Cohort A (siRNA control arm)
- VBI-2601 induced potent anti-HBs responses with titers reaching the upper limit of the assay (1000 IU/L)
- Two early responders in Cohort B achieved **robust boosting of antibody titers (> 100 IU/L) after two doses** of VBI-2601

Phase 2 Combo Study

VBI-2601 + siRNA Combination Induced Strong S Antigen-Specific T-Cell Responses

VBI-2601 with or without co-adjuvant IFN-α generated notable improvements in HBV S Antigen (HBsAg)-specific T-Cell responses compared to siRNA alone



- Addition of VBI-2601 in treatment regimen resulted in higher proportion of patients with potent T-cell responses (> 3x baseline)
- Comparable T-cell responses observed in combination cohorts – with or without IFN-α
- Available data through Week 44 from first 25 evaluable patients; analyses of remaining samples ongoing

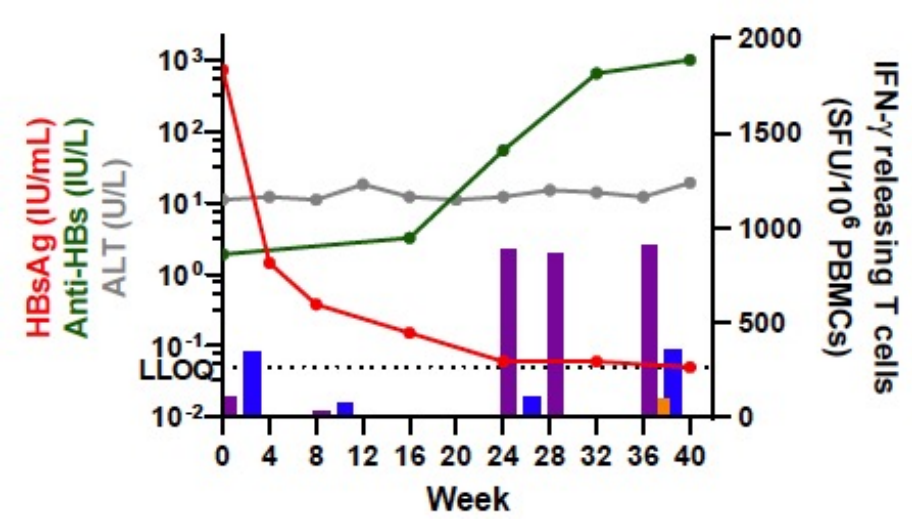
Phase 2 Combo Study

S Antigen Reductions to LLOQ or Below, to an Undetectable Level, Achieved in Two Patients

Robust HBV-specific antibody and T-cell responses associated with S Antigen (HBsAg) reduction observed in both patients

Patient 1 (Cohort B)

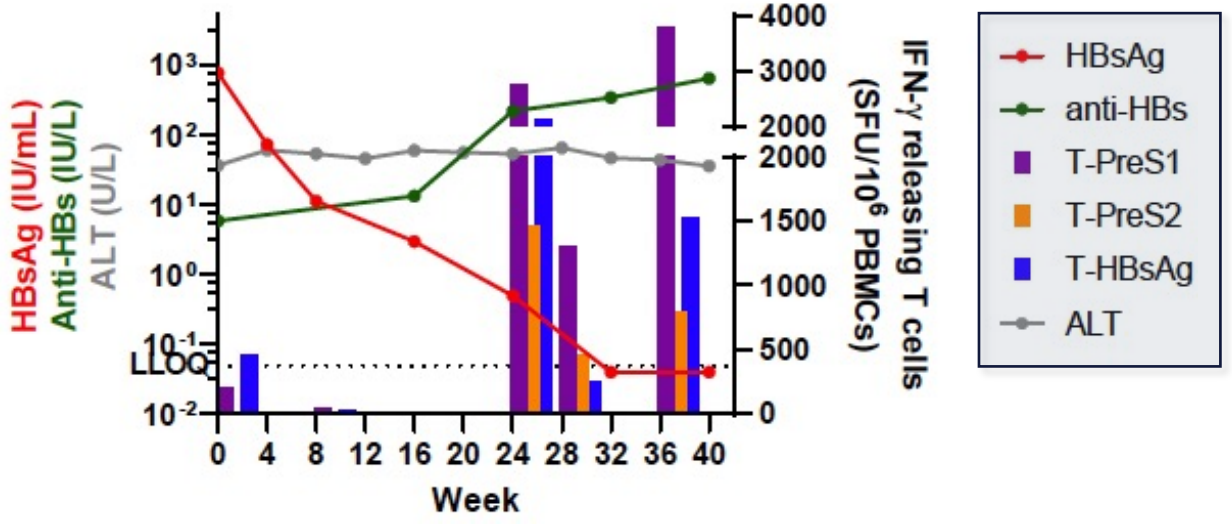
Baseline HBsAg : 723 IU/mL



- Patient 1 achieved **HBsAg at LLOQ** (0.05 IU/mL) at Week 40
- > 4 log_{10} maximum HBsAg reduction from baseline

Patient 2 (Cohort C)

Baseline HBsAg : 776 IU/mL



- Patient 2 achieved **undetectable HBsAg** levels (below LLOQ) at Week 32
- > 4 log_{10} maximum HBsAg reduction from baseline

Follow up for longer-term responses and immune correlation ongoing

VBI-2601 : Upcoming Milestones

- Q3 2023 : Interim topline results expected from Phase 2 study evaluating VBI-2601 as an add-on therapy to potentially improve current standard of care treatment outcomes

- 2023 : Additional clinical data from Phase 2 combination study of VBI-2601 (BRII-179) and BRII-835 (VIR-2218) expected later in 2023

VBI-2601 : Ongoing Partnership with Brii Biosciences

In December 2018, VBI announced a license and collaboration agreement with Brii Biosciences (Brii Bio) to develop a functional cure for hepatitis B

Brii Biosciences
Breakthrough innovation & insight

- **Upfront :** $11M - $4M upfront payment + $7M equity investment
- **Milestones & Royalties :** Up to $117.5M in potential milestone payments and potential low double-digit royalties on commercial sales in the licensed territory
- **Licensed Territories :** China, Hong Kong, Macau, and Taiwan
- VBI will retain all rights outside of the licensed territory with respect to the treatment of hepatitis B

VBI

PreHevbrio

Hepatitis B Vaccine (Recombinant)

Strategic Commercialization Partnerships

- VBI entered into a full end-to-end commercialization partnership with Syneos Health in 2019 to support the U.S. launch of PreHevbrio™, including VBI-dedicated leadership, medical, market access, and sales teams
- Syneos Health selected as partner for their robust and innovative commercialization experience and deep vaccine expertise, including successful partnerships with leading vaccine manufacturers
- VBI and specialty vaccine company Valneva entered into a partnership in 2022 for the commercialization of PreHevbri® in the following initial markets : the U.K., Sweden, Norway, Denmark, Finland, Belgium, and the Netherlands
- Valneva will be responsible for all marketing, sales, and in-country distribution in these European markets, and was chosen as a partner for their extensive vaccine commercialization experience, local knowledge, and relationships

PreHevbrio : Upcoming Milestones

- H1 2023 : Following European Commission and UK Medicines and Healthcare products Regulatory Agency (MHRA) approvals, VBI expects to make PreHevbri available in certain European countries beginning in H1 2023

- 2023 : Following Health Canada approval in December 2022, VBI expects to make PreHevbrio available in Canada in 2023

VBI-1901

Glioblastoma Immunotherapeutic Candidate

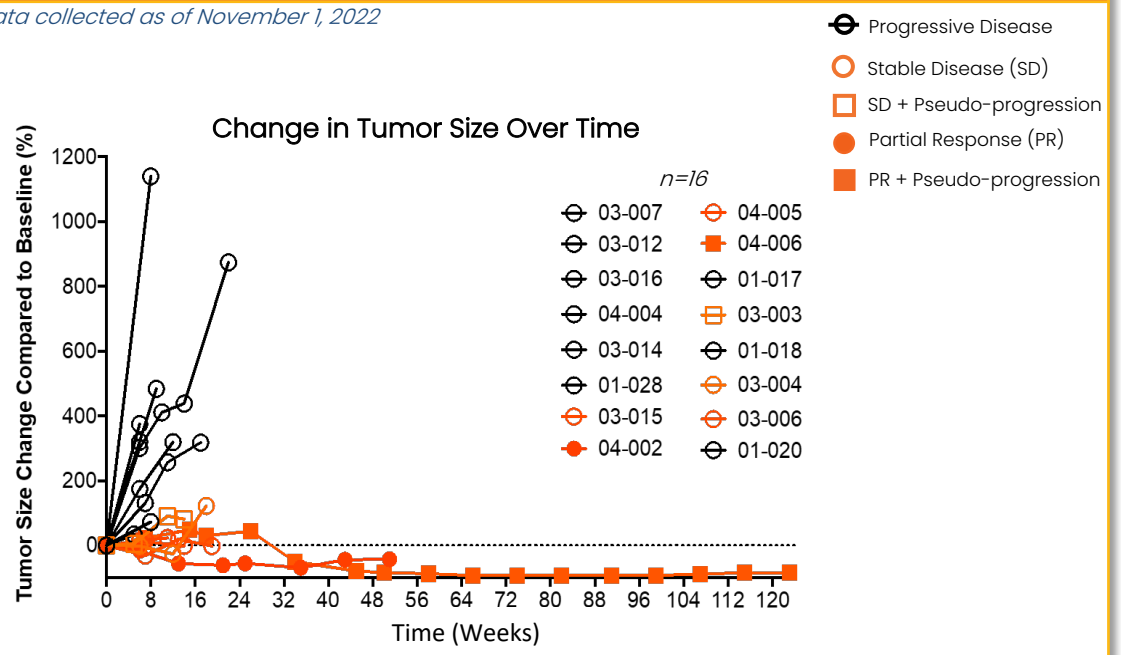
Tumor Responses Translated to Clinical Benefit in Phase 1/2a High-Dose Cohorts

Based upon these rGBM data, U.S. FDA granted Fast Track Designation in June 2021 for VBI-1901 + GM-CSF for the treatment of recurrent GBM patients with first tumor recurrence

Tumor Responses

VBI-1901 10µg + GM-CSF[1] (High Dose Part A + Part B)

Data collected as of November 1, 2022



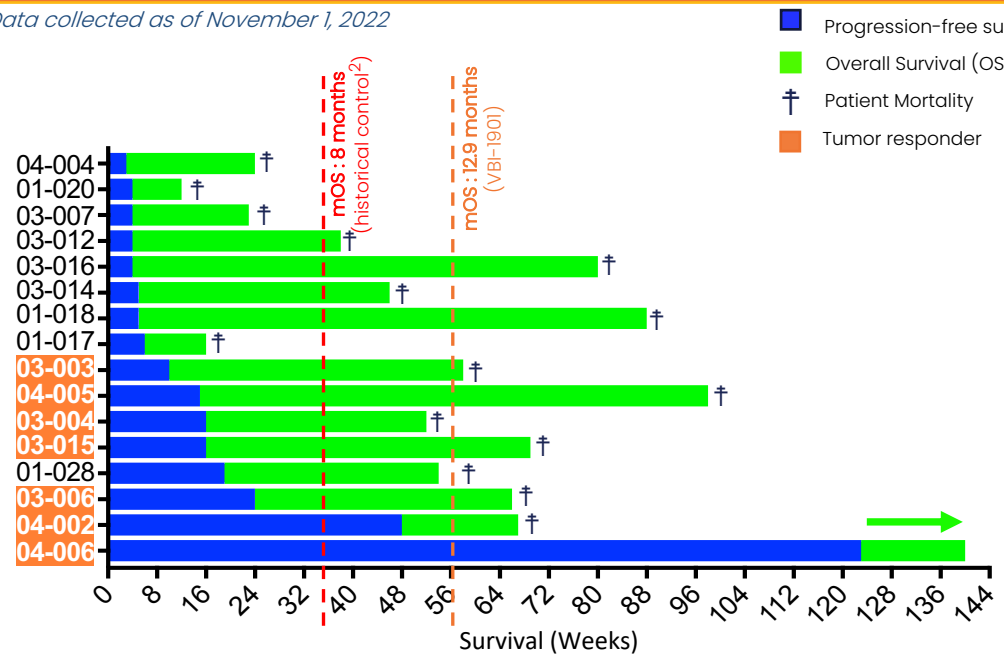
Tumor Responses :

- ✓ 2 Partial Responses (PRs)*
- ✓ 5 Stable Disease (SD)

Clinical Responses

VBI-1901 10µg + GM-CSF[1] (High Dose Part A + Part B)

Data collected as of November 1, 2022



Median & Overall Survival (mOS & OS) :

- ✓ mOS reached at : 12.9 months
- ✓ 12-month : 62.5% (n=10/16)
- ✓ 18-month : 25% (n=4/16)

Source: [1]2022 Society for Neuro-Oncology (SNO) Annual Meeting 2022 (VBI presentation); [2]Taal W, Oosterkamp HM, Walenkamp AME, et al. Single-agent bevacizumab or lomustine versus a combination of bevacizumab plus lomustine in patients with recurrent glioblastoma (BELOB trial): a randomized controlled phase 2 trial. Lancet Oncol. 2014; 15: 943-953; *Tumor responses in glioblastoma patients are classified according to the Response Assessment in Neuro-Oncology (RANO) criteria, which defines a partial response (PR) as a greater than 50% reduction in the sum of products of perpendicular diameters of all measurable enhancing lesions compared with the baseline, sustained for at least four weeks, with no new lesions or clinical progression of disease

VBI-1901 : Upcoming Milestones

- Q2 2023 : Expected initiation of expanded n-size of patients in ongoing VBI-1901 study in recurrent GBM
  - Expansion study to include addition of control arm to support potential accelerated approval, subject to tumor response, improvement in overall survival, and discussions with regulatory bodies

- Mid-Year 2023 : Expected initiation of VBI-1901 in the frontline setting in combination with Agenus' anti-PD-1 monoclonal antibody, balstilimab
  - Expected to initiate as part of the Phase 2 INSIGhT trial, an adaptive platform clinical study

Summary

Summary of Anticipated Upcoming Milestones

Tx HBV
VBI-2601

- Q3 2023 : Interim topline results expected from Phase 2 study evaluating VBI-2601 as an add-on therapy to potentially improve current standard of care treatment outcomes
- 2023 : Additional clinical data from Phase 2 combination study of VBI-2601 (BRII-179) and BRII-835 (VIR-2218) expected later in 2023

GBM
VBI-1901

- Q2 2023 : Expected initiation of expanded n-size of patients in ongoing VBI-1901 study in recurrent GBM - expansion study to include addition of control arm to support potential accelerated approval, subject to tumor response, improvement in overall survival, and discussions with regulatory bodies
- Mid-Year 2023 : Expected initiation of VBI-1901 in the frontline setting in combination with Agenus' anti-PD-1 monoclonal antibody, balstilimab – expected to initiate as part of the Phase 2 INSIGhT trial, an adaptive platform clinical study

Coronaviruses
VBI-2901

- Mid-Year 2023: Interim data from Phase 1 study of VBI-2901 (multivalent coronavirus) expected, subject to speed of enrollment

Px HBV
PreHevbrio (U.S.)

- H1 2023 : Following European Commission and UK Medicines and Healthcare products Regulatory Agency (MHRA) approvals, VBI expects to make PreHevbri available in certain European countries beginning in H1 2023
- 2023 : Following Health Canada approval in December 2022, VBI expects to make PreHevbrio available in Canada in 2023

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