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): June 6, 2024

BARINTHUS BIOTHERAPEUTICS PLC

(Exact name of registrant as specified in its charter)

England and Wales	**001-40367**	**Not Applicable**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(I.R.S. Employer Identification No.)**

Barinthus Biotherapeutics plc
Unit 6-10, Zeus Building Rutherford Avenue,
Harwell, Didcot, OX11 0DF
United Kingdom
(Address of principal executive offices, including zip code)

+44 (0) 1865 818 808
(Registrant's telephone number, including area code)

Not Applicable
(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	Trade Symbol(s)	Name of each exchange on which registered
American Depositary Shares Ordinary shares, nominal value £0.000025 per share*	BRNS	The Nasdaq Global Market

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. ☐

* American Depositary Shares may be evidenced by American Depositary Receipts. Each American Depositary Share represents one (1) ordinary share. Not for trading, but only in connection with the listing of the American Depositary Shares on The Nasdaq Global Market. The American Depositary Shares represent the right to receive ordinary shares and are being registered under the Securities Act of 1933, as amended, pursuant to a separate Registration Statement on Form F-6. Accordingly, the American Depositary Shares are exempt from the operation of Section 12(a) of the Securities Exchange Act of 1934, as amended, pursuant to Rule 12a-8.

Item 7.01 Regulation FD Disclosure.
On June 6, 2024, Barinthus Biotherapeutics plc (the "Company") issued a press release titled "Barinthus Bio's VTP-300 Trials Demonstrate Ability to Achieve Undetectable HBsAg levels and Statistical Significance in Lowering HBsAg Levels in People with Chronic Hepatitis B." A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

On June 6, 2024, the Company updated its corporate presentation for use in meetings with investors, analysts and others. A copy of this presentation is furnished as Exhibit 99.2 to this Current Report on Form 8-K. The Company undertakes no obligation to update, supplement or amend the presentation.

The information in Item 7.01 of this Current Report on Form 8-K (including Exhibits 99.1 and 99.2) is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the Exchange Act), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any filing by the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 8.01. Other Events.
On June 6, 2024, the Company announced updated data from two clinical trials in people with chronic hepatitis B (CHB) at the European Association for the Study of the Liver (EASL) Congress 2024. The presentations include updated interim data from the Phase 2b clinical trial (HBV003), as well as new interim end of treatment (EOT) data from the Phase 2a clinical trial (IM-PROVE II, AB-729-202) in partnership with Arbutus Biopharma (NASDAQ: ABUS), both in people with CHB receiving ongoing standard of care nucleos(t)ide analogue (NUC) therapy.

Interim HBV003 data: VTP-300 and Low-dose Nivolumab
Interim data from the HBV003 trial indicate that treatment with VTP-300 and low-dose nivolumab is generally well-tolerated and sustained HBsAg declines were observed across all groups, with some participants reaching undetectable levels of HBsAg. As of the data cutoff on April 15, 2024, 91 out of a planned 120 virally suppressed patients with CHB on stable NUC therapy were enrolled in the trial, 40 of whom had screening HBsAg ≤200 IU/mL as per the study protocol amendment in 2023 and 21 of whom had been assessed for NUC discontinuation. Participants reaching Day 169 were assessed to confirm if they were eligible to discontinue NUC therapy in line with the study criteria. Data presented focuses on participants with baseline HBsAg ≤200 IU/mL:

- 76% of assessed participants (n=16/21) were eligible for NUC discontinuation at EOT, 7 of these discontinued.
  - 71% (n=5/7) remained off NUC therapy, up to 44 weeks post-discontinuation in one case.
- 19% of participants (n=4/21) across the groups assessed for NUC discontinuation, had undetectable HBsAg at any time.
  - This has been maintained for ≥16 weeks in 2 cases.
- 67% of participants (n=14/21) across all groups assessed for NUC discontinuation had HBsAg <10 IU/mL at Week 24 or later.
- Robust T cell responses as measured by IFNy ELISpot were observed to all encoded antigens.
- There were no Serious Adverse Events (SAEs), Grade 3 or 4 Adverse Events (AEs) related to treatment. There was one treatment discontinuation due to an AE. The most common treatment-related AE was thyroid dysfunction, reported in 9% of participants (n=8/91) with normal Thyroid Function Tests reported in 7 of 8 (88%) at last recorded visit. Transient alanine transaminase (ALT) elevations occurred in 14 participants through to Day 85.

End of Treatment IM-PROVE interim data: imdusiran and VTP-300
Data from IM-PROVE II as of the data cutoff on April 12, 2024, indicate that treatment with imdusiran, Arbutus' RNAi therapeutic candidate, followed by Barinthus Bio's T-cell stimulating immunotherapeutic candidate, VTP-300, was generally well-tolerated and observed to maintain low HBsAg levels during the post-treatment follow-up period. The data were presented today by Dr. Kosh Agarwal, MD, Consultant Hepatologist and Transplant Physician at the Institute of Liver Studies at King's College Hospital, London, during a session focused on new treatments for viral hepatitis B at the EASL Congress.

Dr. Agarwal presented the following data from 38 of 40 participants that were on stable NUC therapy throughout the treatment period. They received imdusiran (60mg every 8 weeks) for 24 weeks and were then randomized to receive either VTP-300 or placebo at Weeks 26 and 30:

- Robust reductions of HBsAg were observed during the imdusiran lead-in period with 95% of patients achieving HBsAg <100 IU/mL before undergoing dosing in the VTP-300 treatment or placebo groups.

- At 24-weeks post-EOT, there was a significant difference ($p<0.05$) in HBsAg levels between the VTP-300 treatment group (n=5) and placebo (n=6).
- 94% of participants (n=18/19) in the VTP-300 treatment group achieved HBsAg levels of <100 IU/mL and 36% had <10 IU/mL (n=7/19) at EOT (Week 48) compared to the placebo group, 84% (n=16/19) and 21% (n=4/19), respectively.
    - Similarly, at 24-weeks post-EOT (Week 72), the VTP-300 treatment group had lower HBsAg levels with 80% of participants at <100 IU/mL (n= 4/5) and 60% at <10 IU/mL (n=3/5) than the placebo group, 16% (n=1/6) and 0% (n=0/6), respectively.
- 84% of participants (n=16/19) in the VTP-300 treatment group met criteria at EOT (Week 48) to discontinue NUC therapy vs 52% in the placebo group (n=10/19).
- In the VTP-300 treatment group, 20% of participants (n=1/5) achieved undetectable HBsAg at 24-weeks post-EOT and a further 20% of participants (n=1/5) had a >1.5$\log_{10}$ decline between the last two visits during the NUC therapy discontinuation follow-up period.
- Treatment with imdusiran and VTP-300 was generally well-tolerated. There were no reported SAEs, Grade 3 or 4 AEs or discontinuations due to treatment. The most common treatment-related AEs in two or more patients were injection site-related (both imdusiran and VTP-300) and transient ALT increases (imdusiran).

Forward Looking Statements

This press release contains forward-looking statements regarding Barinthus Bio within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, which can generally be identified as such by use of the words "may," "will," "plan," "forward," "encouraging," "believe," "potential," and similar expressions, although not all forward-looking statements contain these identifying words. These forward-looking statements include, without limitation, express or implied statements regarding our product development activities and clinical trials, including timing for readouts of any interim data or next steps for any of our programs, including VTP-300 and the HBV003 trial, the timing for readouts for the IM-PROVE II trial of our collaboration partner, Arbutus, the tolerability or potential benefits of VTP-300 or imdusiran, and our ability to develop and advance our current and future product candidates and programs. Any forward-looking statements in this press release are based on our management's current expectations and beliefs and are subject to numerous risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks and uncertainties related to the success, cost and timing of our pipeline development activities and planned and ongoing clinical trials, our ability to execute on our strategy, regulatory developments, our ability to fund our operations and access capital, the risk that interim or topline data may not reflect final data or results, global economic uncertainty, including disruptions in the banking industry, the conflict in Ukraine, the conflict in Israel and Gaza, and other risks identified in our filings with the Securities and Exchange Commission (the "SEC"), including our Annual Report on Form 10-K for the year ended December 31, 2023, our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. We caution you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. We expressly disclaim any obligation to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

99.1	Press Release dated June 6, 2024.
99.2	Investor Presentation dated June 2024
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.

Barinthus Biotherapeutics plc

Date: June 6, 2024

By: /s/ William Enright
William Enright
Chief Executive Officer

Barinthus Bio's VTP-300 Trials Demonstrate Ability to Achieve Undetectable HBsAg levels and Statistical Significance in Lowering HBsAg Levels in People with Chronic Hepatitis B

- *In the HBV003 trial, 67% of participants had HBsAg <10 IU/mL and 19% of participants had undetectable HBsAg when assessed for NUC discontinuation (end of treatment) or later, and 76% of participants were eligible for nucleos(t)ide analogue (NUC) therapy discontinuation.*
- *In the IM-PROVE II trial, conducted in partnership with Arbutus Biopharma, a statistically significant difference was observed in HBsAg levels between the VTP-300 treatment and placebo groups at 24-weeks post-*end of treatment (*EOT) and 84% of participants who received VTP-300 discontinued standard of care (SoC) NUC therapy vs 53% receiving placebo.*

OXFORD, United Kingdom, June 06, 2024 (GLOBE NEWSWIRE) -- Barinthus Biotherapeutics plc (NASDAQ: BRNS), a biopharmaceutical company developing novel T cell immunotherapeutic candidates, today announced the presentation of updated data from two clinical trials in people with chronic hepatitis B (CHB) at the European Association for the Study of the Liver (EASL) Congress 2024. The presentations include updated interim data from the Phase 2b clinical trial (HBV003), as well as new interim EOT data from the Phase 2a clinical trial (IM-PROVE II, AB-729-202) in partnership with Arbutus Biopharma (NASDAQ: ABUS), both in people with CHB receiving ongoing SoC NUC therapy.

Interim HBV003 data: VTP-300 and Low-dose Nivolumab
Interim data from the HBV003 trial indicate that treatment with VTP-300 and low-dose nivolumab is generally well-tolerated and sustained HBsAg declines were observed across all groups, with some participants reaching undetectable levels of HBsAg. As of the data cutoff on April 15, 2024, 91 out of a planned 120 virally suppressed patients with CHB on stable NUC therapy were enrolled in the trial, 40 of whom had screening HBsAg ≤200 IU/mL as per the study protocol amendment in 2023 and 21 of whom had been assessed for NUC discontinuation. Participants reaching Day 169 were assessed to confirm if they were eligible to discontinue NUC therapy in line with the study criteria. Data presented focuses on participants with baseline HBsAg ≤200 IU/mL:

- 76% of assessed participants (n=16/21) were eligible for NUC discontinuation at EOT, 7 of these discontinued.
  - 71% (n=5/7) remained off NUC therapy, up to 44 weeks post-discontinuation in one case.
- 19% of participants (n=4/21) across the groups assessed for NUC discontinuation, had undetectable HBsAg at any time.
  - This has been maintained for ≥16 weeks in 2 cases.
- 67% of participants (n=14/21) across all groups assessed for NUC discontinuation had HBsAg <10 IU/mL at Week 24 or later.
- Robust T cell responses as measured by IFNγ ELISpot were observed to all encoded antigens.
- There were no Serious Adverse Events (SAEs), Grade 3 or 4 Adverse Events (AEs) related to treatment. There was one treatment discontinuation due to an AE. The most common treatment-related AE was thyroid dysfunction, reported in 9% of participants (n=8/91) with normal Thyroid Function Tests reported in 7 of 8 (88%) at last recorded visit. Transient alanine transaminase (ALT) elevations occurred in 14 participants through to Day 85.

"With the majority of patients assessed reaching very low levels of HBsAg and eligibility for NUC discontinuation, we believe these data are further evidence that VTP-300 could be a critical component of a functional cure regimen," said Bill Enright, Chief Executive Officer of Barinthus Bio. "At the time of the data cut and analysis, the most advanced participant had undetectable levels of HBsAg and HBV DNA for more than five months and had been able to remain off NUC therapy for 44 weeks, further highlighting the potential of VTP-300 in reshaping the chronic HBV treatment landscape."

"People with Hepatitis B currently require life-long therapy and may still progress to liver failure or liver cancer, which is a slowly developing and often-devastating process," said Prof. Man-Fung Yuen, Chief of Division of Gastroenterology and Hepatology, Queen Mary Hospital, University of Hong Kong, Hong Kong. "I'm encouraged by the potential of VTP-300 to provide sustained viral suppression and what may ultimately be a potential functional cure, which would allow patients to stop taking life-long therapies and halt progression of liver failure or cancer."

End of Treatment IM-PROVE interim data: imdusiran and VTP-300

Data from IM-PROVE II as of the data cutoff on April 12, 2024, indicate that treatment with imdusiran, Arbutus' RNAi therapeutic candidate, followed by Barinthus Bio's T-cell stimulating immunotherapeutic candidate, VTP-300, was generally well-tolerated and observed to maintain low HBsAg levels during the post-treatment follow-up period. The data were presented today by Dr. Kosh Agarwal, MD, Consultant Hepatologist and Transplant Physician at the Institute of Liver Studies at King's College Hospital, London, during a session focused on new treatments for viral hepatitis B at the EASL Congress.

Dr. Agarwal presented the following data from 38 of 40 participants that were on stable NUC therapy throughout the treatment period. They received imdusiran (60mg every 8 weeks) for 24 weeks and were then randomized to receive either VTP-300 or placebo at Weeks 26 and 30:

- Robust reductions of HBsAg were observed during the imdusiran lead-in period with 95% of patients achieving HBsAg <100 IU/mL before undergoing dosing in the VTP-300 treatment or placebo groups.
- At 24-weeks post-EOT, there was a significant difference ($p<0.05$) in HBsAg levels between the VTP-300 treatment group (n=5) and placebo (n=6).
- 94% of participants (n=18/19) in the VTP-300 treatment group achieved HBsAg levels of <100 IU/mL and 36% had <10 IU/mL (n=7/19) at EOT (Week 48) compared to the placebo group, 84% (n=16/19) and 21% (n=4/19), respectively.
    - Similarly, at 24-weeks post-EOT (Week 72), the VTP-300 treatment group had lower HBsAg levels with 80% of participants at <100 IU/mL (n= 4/5) and 60% at <10 IU/mL (n=3/5) than the placebo group, 16% (n=1/6) and 0% (n=0/6), respectively.
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- Treatment with imdusiran and VTP-300 was generally well-tolerated. There were no reported SAEs, Grade 3 or 4 AEs or discontinuations due to treatment. The most common treatment-related AEs in two or more patients were injection site-related (both imdusiran and VTP-300) and transient ALT increases (imdusiran).

Dr. Agarwal commented, "These data show that adding imdusiran and VTP-300 to ongoing NUC therapy in CHB patients meaningfully reduces HBsAg after the end of the treatment period. I am impressed with the number of patients that qualified to stop NUC therapy in the VTP-300 group and the clear separation in HBsAg levels between the treatment group and placebo at Week 72."

"The data clearly showed the role of VTP-300 in maintaining low HBsAg levels and the therapeutic potential of this specific combination approach, with imdusiran, to lower and maintain low levels of HBsAg," said Dr. Nadege Pelletier, Chief Scientific Officer of Barinthus Bio. "As we continue to monitor HBsAg declines in the VTP-300 treatment group we are eager to see the next data cut in the fourth quarter of the year, which we expect will include data from the triple combination approach, including nivolumab. Understanding the impact of nivolumab could take us another step closer to a potential hepatitis B functional cure regimen."

The slides from the poster and oral presentations at EASL 2024 can be found on the Barinthus Bio website under the Events & Presentation page.

About the HBV003 Trial
The HBV003 trial is designed to obtain critical information on treatment dosing regimen with patients receiving VTP-300 and low-dose (LD) nivolumab. All Groups received ChAdOx at Day 1; Groups 1 & 2 received MVA with nivolumab at Day 29; Group 2 was dosed again with MVA and nivolumab at Day 85; Group 3 received only MVA at Day 29, nivolumab at Day 36, and a conditional second MVA dose at Day 85 to evaluate anti-PD-1 inhibition timing. The conditional MVA dose was administered if participants had HBsAg ≥10 IU/mL. In 2023, the study inclusion criteria was amended from people with CHB with HBsAg ≥10 and <4,000 IU/mL to ≥10 and ≤200 IU/mL, as strongest responses were observed in participants with HBsAg ≤200 IU/ml.

About the IM-PROVE II Trial
The IM-PROVE II (AB-729-202) Phase 2a clinical trial initially enrolled 40 non-cirrhotic, virally suppressed CHB patients that were on stable NUC-therapy. The patients initially received imdusiran (60mg every 8 weeks) for 24 weeks with on-going NUC-therapy and were then randomized to receive either VTP-300 or placebo at Weeks 26 and 30 (and conditionally at Week 38 if they experienced a >0.5 log_{10} decline in HBsAg between Weeks 26 and 34). After completion of the treatment period, Week 48, those patients who met the following criteria: ALT levels less than two times the upper level of normal, HBV DNA less than the lower limit of quantitation, HBsAg <100 IU/mL, and HBeAg negative, discontinued NUC-therapy and were followed for an additional 48 weeks. Those who did not meet the criteria continued on NUC-therapy for an additional 24 weeks of follow-up.

This trial has been amended to include an additional cohort of 20 patients that will receive imdusiran plus NUC-therapy for 24 weeks followed by VTP-300 plus up to two low doses of nivolumab, an approved PD-1 monoclonal antibody. Enrollment is complete in this additional cohort with preliminary data expected in the second half of 2024.

About VTP-300
VTP-300 is an immunotherapeutic candidate consisting of an initial dose using the ChAdOx vector and a secondary dose(s) using the MVA vector, both encoding multiple HBsAg, including full-length surface, modified polymerase, and core antigens. VTP-300 is the first antigen-specific immunotherapy that has been shown to induce sustained reductions in HBsAg. Barinthus Bio is studying VTP-300 in combination with other agents, including siRNA and low-dose anti-PD-1 antibodies, to control the infection and counterbalance the immune suppression and T cell exhaustion in the liver caused by chronic HBV infection.

About HBV
Globally it is estimated that there are approximately 254 million people living with chronic HBV infection.[1] This includes up to 2.4 million in the U.S. and 10.6 million in Europe, with the highest prevalence in East Asia and Africa.[1,2] Approximately 1.1 million people died from HBV and related complications in 2022, such as liver cirrhosis and hepatocellular carcinoma.[1] Due to low HBV diagnosis rates, only 13% of people living with chronic hepatitis B are aware of their infection and less than 3% had received antiviral treatment at the end of 2022.[1]

About Barinthus Biotherapeutics
Barinthus Bio is a clinical-stage biopharmaceutical company developing novel T cell immunotherapeutic candidates designed to guide the immune system to overcome chronic infectious diseases, autoimmunity and cancer. Helping people living with serious diseases and their families is the guiding principle at the heart of Barinthus Bio. With a broad pipeline, built around three proprietary platform technologies: ChAdOx, MVA and SNAP, Barinthus Bio is advancing a pipeline of four product candidates across a diverse range of therapeutic

areas, including: VTP-300, an immunotherapeutic candidate designed as a potential component of a functional cure for chronic HBV infection; VTP-200, a non-surgical product candidate for persistent high-risk human papillomavirus (HPV); VTP-1000, an autoimmune candidate designed to utilize the SNAP-Tolerance Immunotherapy (TI) platform to treat patients with celiac disease; and VTP-850, a second-generation immunotherapeutic candidate designed to treat recurrent prostate cancer. Barinthus Bio's proven scientific expertise, diverse portfolio and focus on pipeline development uniquely positions the company to navigate towards delivering treatments for people with infectious diseases, autoimmunity and cancers that have a significant impact on their everyday lives. For more information, visit www.barinthusbio.com.

References

1. WHO, Global hepatitis report 2024.
2. Hepatitis B Foundation, What is Hepatitis B?, 2023.

Barinthus Bio's Forward Looking Statements

This press release contains forward-looking statements regarding Barinthus Bio within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, which can generally be identified as such by use of the words “may,” “will,” “plan,” “forward,” “encouraging,” “believe,” “potential,” and similar expressions, although not all forward-looking statements contain these identifying words. These forward-looking statements include, without limitation, express or implied statements regarding our product development activities and clinical trials, including timing for readouts of any interim data or next steps for any of our programs, including VTP-300 and the HBV003 trial, the timing for readouts for the IM-PROVE II trial of our collaboration partner, Arbutus, the tolerability or potential benefits of VTP-300 or imdusiran, and our ability to develop and advance our current and future product candidates and programs. Any forward-looking statements in this press release are based on our management’s current expectations and beliefs and are subject to numerous risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks and uncertainties related to the success, cost and timing of our pipeline development activities and planned and ongoing clinical trials, our ability to execute on our strategy, regulatory developments, our ability to fund our operations and access capital, the risk that interim or topline data may not reflect final data or results, global economic uncertainty, including disruptions in the banking industry, the conflict in Ukraine, the conflict in Israel and Gaza, and other risks identified in our filings with the Securities and Exchange Commission (the “SEC”), including our Annual Report on Form 10-K for the year ended December 31, 2023, our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. We caution you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. We expressly disclaim any obligation to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

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Barinthus Biotherapeutics Corporate Presentation

Guiding the Immune System to Cure Disease

June, 2024

BARINTHUS BIOTHERAPEUTICS

Disclosure

This presentation includes express and implied "forward-looking statements," including forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward looking statements include all statements that are not historical facts, and in some cases, can be identified by terms such as "may," "will," "could," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "potential," "ongoing," or the negative of these terms, or other comparable terminology intended to identify statements about the future. Forward-looking statements contained in this presentation include, but are not limited to, statements regarding: our product development activities and clinical trials, including timing for readouts of any interim data for any of our programs and initiation of clinical trials, our regulatory filings and approvals, our estimated cash runway and cash burn, our ability to develop and advance our current and future product candidates and programs, our ability to establish and maintain collaborations or strategic relationships or obtain additional funding, the rate and degree of market acceptance and clinical utility of our product candidates, and the ability and willingness of our third-party collaborators to continue research and development activities relating to our product candidates. By their nature, these statements are subject to numerous risks and uncertainties, including factors beyond our control, that could cause actual results, performance or achievement to differ materially and adversely from those anticipated or implied in the statements. Such risks and uncertainties, include, without limitation, risks and uncertainties related to: preclinical and clinical studies, the success, cost and timing of our product development activities and planned and ongoing preclinical studies and clinical trials, whether results from preclinical studies and clinical trials will be predictive of the results of future trials, our ability to execute on our strategy, regulatory developments, our ability to fund our operations, global economic uncertainty, including disruptions in the banking industry, and the impact that the COVID-19 pandemic may have on our clinical trials, preclinical studies and access to capital, and other risks, uncertainties and other factors identified in our filings with the Securities and Exchange Commission (the "SEC"), including our Annual Report on Form 10-K for the year ended December 31, 2023, our Quarterly Report on Form 10-Q for the most recently ended fiscal quarter and subsequent filings with the SEC. You should not rely upon forward-looking statements as predictions of future events. Although our management believes that the expectations reflected in our statements are reasonable, we cannot guarantee that the future results, performance or events and circumstances described in the forward-looking statements will be achieved or occur and actual results may vary. Recipients are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date such statements are made and should not be construed as statements of fact. Except as required by law, we do not assume any intent to update any forward-looking statements after the date on which the statement is made, whether as a result of new information, future events or circumstances or otherwise.

Certain information contained in this presentation and statements made orally during this presentation relate to or are based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While we believe these third-party studies, publications, surveys and other data to be reliable as of the date of this presentation, it has not independently verified, and makes no representations as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, no independent source has evaluated the reasonableness or accuracy of our internal estimates or research and no reliance should be made on any information or statements made in this presentation relating to or based on such internal estimates and research.

Company Overview

Guiding the immune system to cure disease

Diverse pipeline with anticipated near-term clinical milestones

- 4 key programs in infectious disease, autoimmunity and cancer.
- Novel SNAP-TI platform moving into the clinic: trial initiation in celiac disease anticipated in Q3 2024.[1]
- 2 Phase 2 HBV data readouts expected in Q4 2024.[1]

Validated platforms accumulating clinical data

- Proprietary platforms (ChAdOx, MVA, SNAP) designed to drive focused immune responses.
- Clinical data generated in chronic HBV infection.

Strong Balance Sheet

- Cash of $130 million.[2]
- Outstanding ordinary shares: 39.0 million.
- Estimated cash runway into Q4 2025.[3]
- No debt or outstanding warrants.

[1] Based on management's current estimates on expected clinical data milestones.
[2] Including cash, cash equivalents and restricted cash as of March 31, 2024, as reported on Form 10-Q on May 13, 2024.
[3] Based on management's current estimate of status and strategy. Any changes could be material.

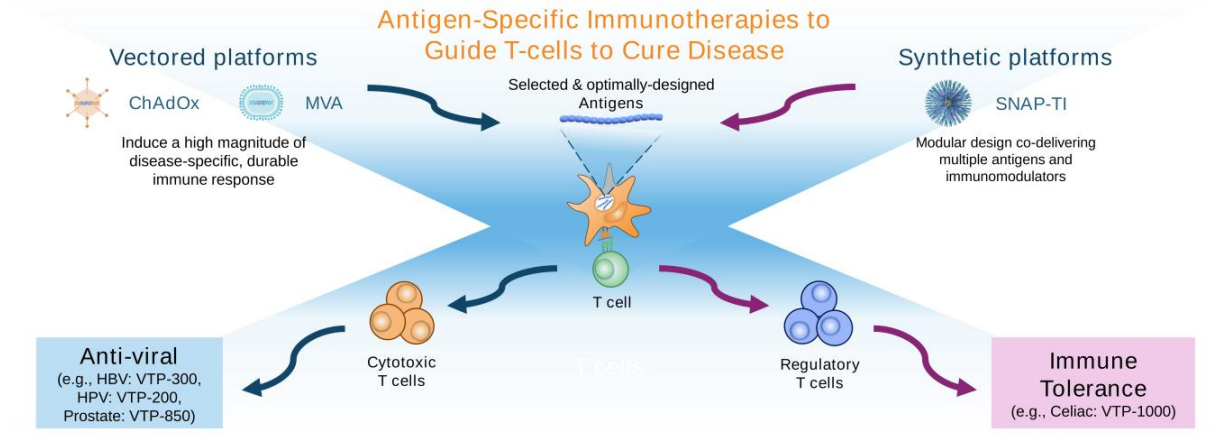
Our Mission

Advancing the next generation of immunotherapies that lead T cells to gain control over disease and improve patients' lives.

BARINTHUS

Our Approach

Chronic infectious diseases & autoimmunity occur when there is an imbalance in the immune system leading to its inability to fight the disease.



BARINTHUS

Diverse Pipeline With Anticipated Near-Term Clinical Milestones

Harnessing the Power of Antigen-Specific Immunotherapies to Treat Chronic Infectious Diseases, Autoimmunity and Cancer

Program	Product Candidate*	Therapeutic For	Preclinical	Phase 1	Phase 2	Phase 3	Status/Anticipated Upcoming Milestones
Infectious Disease Programs	VTP-300 ◆ ✓	Chronic Hepatitis B Virus (HBV) infection					Phase 2b interim analysis & Phase 2a interim results (Q4 2024)
	VTP-200 ▶ ✓	Persistent Human Papillomavirus (HPV) infection					Phase 1b/2 complete, analysis ongoing
Autoimmune Programs	VTP-1000	Celiac disease					IND acceptance Phase 1 initiation (Q3 2024)
Cancer Programs	VTP-800/850 ✓	Prostate cancer					Phase 1/2 futility data (2025)

◆ Data supporting proof-of-concept announced ▶ Near-term proof-of-concept readout ✓ Existing human clinical data ChAdOx + MVA SNAP-TI

*Barinthus Bio has worldwide rights for all product candidates.
These are estimated timelines only and our pipeline may be subject to change.

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VTP-300

Hepatitis B Virus (HBV) Therapeutic

BARINTHUS BIOTHERAPEUTICS

Guiding the immune system to cure disease

HBV Chronic Infection Represents a Large Market Opportunity

There is an urgent need to develop effective therapeutic strategies to cure chronic HBV infection.

~254M Patients are chronically infected with HBV.[1]

1.2M New HBV infections per year.[1]

~ 13% Patients are diagnosed.[1]

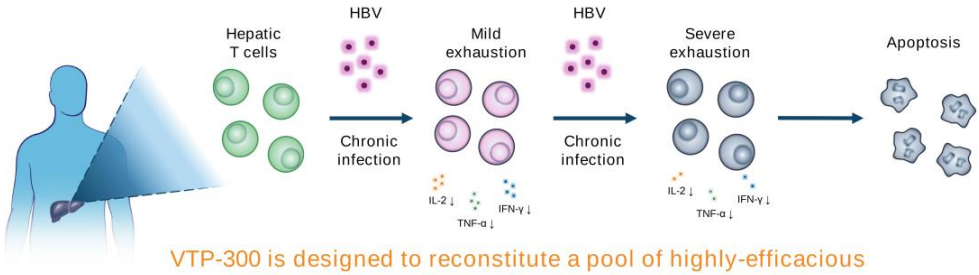
Limitations of Current Treatments

- Existing therapies typically require chronic treatment.
- NUCs are slow-acting with low cure efficacy.[2]
- Pegylated interferon has significant side effects.[3]
- Less than 10% of patients achieve a functional cure with existing therapies.

HBV: hepatitis B virus; NUCs: Nucleos(t)ide analogs.
[1] WHO, Global hepatitis report, 2024 [2] Broquetas T and Carrion JA, Hepat Med. 2002;14:87-100. [3] Van Zonneveld M, et al, Aliment Pharmacol Ther. 2005;21(9):1163-71

Chronic HBV Infection Can Lead to T Cell Exhaustion

- Chronic exposure to HBV and high levels of HBsAg leads to stepwise and progressive loss of T cell function (T cell exhaustion).
- Exhausted T cells lose their proliferative capacity and effector functions (decreased secretion of cytokines and killing molecules).
- In severe stages of exhaustion, HBV specific T cells can be completely deleted, leading to the loss of HBV-specific T cell response and no control of the disease, which continues to progress.



VTP-300 is designed to reconstitute a pool of highly-efficacious HBV-specific T cells to gain control over the disease.

Adapted from Ye et al, 2015.

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VTP-300 Could be a Critical Component to a Functional Cure Regimen for HBV

A functional cure will likely require a combination of agents with complementary mechanisms of action. VTP-300 is an investigational antigen-specific immunotherapy that is being evaluated as a critical component to enhancing rates of functional cure in combination with other therapies, in two ongoing Phase 2 trials.

Three potential components to a functional cure

Inhibit viral replication	Directly lower viral antigen Hepatitis B surface antigen burden (HBsAg)	Stimulate host immune system response
NUCs Capsid & Entry Inhibitors (Investigational)	RNAi Oligonucleotide Monoclonal antibodies (mAbs)	Antigen-specific immunotherapies (VTP-300) PD-1 Inhibitors Immunostimulants (TLR agonists)

Defining functional cure:
- HBsAg undetectable
- HBV DNA undetectable
- With or without HBsAb seroconversion
- 6 months off therapy

2 ongoing trials:
- HBV003: VTP-300 + αPD1
- AB-729-202: siRNA + VTP-300 ± αPD1

VTP-300 is designed to engage the host immune system and has been shown to induce sustained HBsAg reduction in ongoing trials.[1]

[1] Based on interim data.

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VTP-300 Trials Overview – Q2 2024 Update

Key updates in these data from those previously presented at AASLD in the fourth quarter of 2023 include:

Data Update		HBV003 – Phase 2b
Nov 23'	**June 24'**	
9/40	21/40	participants out to week 24.
7/9	16/21	participants were eligible for NUC discontinuation.
1/3	5/7	participants who discontinued are still off NUC therapy.
1/9	4/21	participants have had undetectable levels of surface antigen at any time.
Not reported	14/21	participants have <10 IU/mL HBsAg at Week 24 or later.

Data Update		AB-729-202 – Phase 2a
Nov 23'	**June 24'**	
12/40	38/40	participants out to week 48.
0	11	participants out to week 72.
100%	84%	met NUC discontinuation criteria in Group A (VTP-300).
Not reported	1	VTP-300 subject reached HBsAg undetectable at Week 72 after >2 log decline between Week 64 and 72.

HBV003: Phase 2b Study – Currently Enrolling Patients

VTP-300 + Low-Dose (LD) nivolumab (N=120) - Initiated in Q4 2022

Objective: Evaluating Additional Dosing and PD-1 Inhibition Timing

Discontinuation criteria

- ALT <2 × ULN, and
- HBV DNA <LLOQ, and
- Hepatitis B e Antigen (HBeAg) negative, and
- HBsAg <100 IU/mL, and/or
- HBsAb positive

Inclusion Criteria

- HBV DNA ≤1,000 IU/mL.
- HBsAg ≤200 IU/mL.
- On NUCs for ≥6 months.

Primary Endpoint

- % participants with a greater than 1 log HBsAg reduction at 6 months after initiation of therapy.

Secondary Endpoints

- Safety: incidence of AEs and SAEs.
- T cell response.

HBV003 results will inform treatment dosing regimen

Group 1: Mirrors Group 3 in HBV002 to further support response effect observed.

Group 2: Assesses if additional dose of MVA-HBV with LD nivolumab at Day 85 further reduces HBsAg.

Group 3: Assesses if delaying LD nivolumab until after MVA-HBV is more optimal (plus adds option of 2nd MVA-HBV dose).

Study Reference: NCT05343481
ALT: Alanine aminotransferase; LLOQ: lower limit of quantitation; ULN: upper limit of normal.

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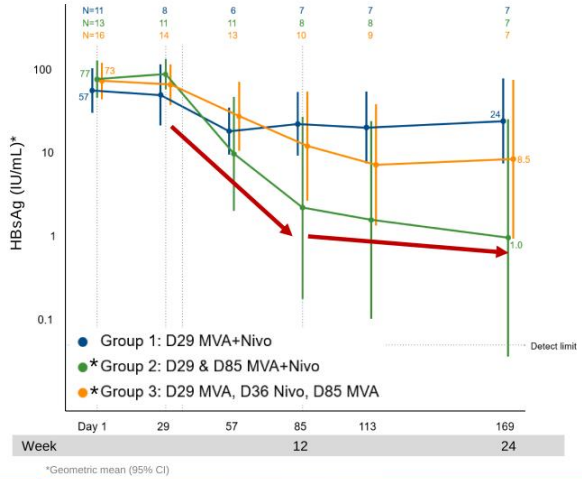
HBV003: Sustained HBsAg Declines Observed in All Groups

Participants with screening HBsAg ≤200 IU/mL



*Geometric mean (95% CI)

	Group 1 (N=7)	Group 2 (N=7)	Group 3 (N=7)	Total (N=21)
≥0.5 log reduction at Day 169 (Week 24)	2 (29%)	5 (71%)	6 (86%)	13 (62%)
≥1 log reduction at Day 169 (Week 24)	0	5 (71%)	1 (14%)	6 (29%)

- Robust HBsAg declines observed soon after Day 29 administration.
- HBsAg declines after Day 85 maintained in all Groups.

* *Participants received a Day 85 dose only if HBsAg ≥10 IU/mL; 7 of* 18 in Groups 2 and 3 received the Day 85 dose.

Interim data - Data cut-off date April 15, 2024.

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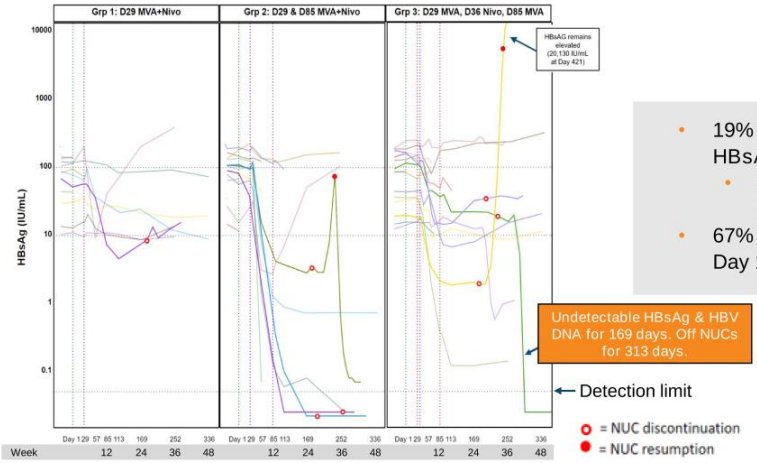
HBV003: Undetectable HBsAg Reached in Some Participants

Individual HBsAg declines in participants with HBsAg
≤200 IU/mL at baseline



- 19% (4 of 21) participants became HBsAg-undetectable, across all groups.
  - 2 cases have maintained this for **≥16** weeks.
- 67% (14 of 21) had HBsAg <10 IU/mL at Day 169 or later.

Interim data - Data cut-off date April 15, 2024.

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HBV003: NUC Discontinuations Could Lead to Functional Cure

HBsAg reductions (patients with HBsAg ≤200 & Day 169 follow-up)

	Group 1 (N=7)	Group 2 (N=7)	Group 3 (N=7)	Total (N=21)
Undetectable at Day 169 (Week 24)	0	2 (29%)	0	2 (10%)
Discontinued NUCs	1 (14%)	3 (43%)	3 (43%)	7 (33%)
Undetectable at any time	0	3 (43%)	1 (14%)	4 (19%)
<10 IU/mL at Day 169 (Week 24) or later	4 (57%)	5 (71%)	5 (71%)	14 (67%)

- 76% (16 of 21) participants were eligible for NUC discontinuation.
  - 7 of these discontinued NUCs.
  - 5 remain off NUCs, up to 44 weeks post-discontinuation in 1 case.
- Post-dose T cell responses were observed across the three HBV antigens.

Interim data - Data cut-off date April 15, 2024.

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HBV003: Safety

Safety (all participants)

	Group 1 (N=29)	Group 2 (N=31)	Group 3 (N=31)	Total (N=91)
Treatment-emergent AE	10 (34%)	13 (42%)	16 (52%)	39 (43%)
Grade 1 max severity	9 (31%)	8 (26%)	11 (35%)	28 (31%)
Grade 2	1 (3%)	3 (10%)	5 (16%)	9 (10%)
Grade 3 or 4	0	2 (6%)	0	2 (2%)
Related AE	2 (7%)	2 (6%)	10 (32%)	14 (15%)
Related to VTP-300	2 (7%)	1 (3%)	4 (13%)	7 (8%)
Related to nivolumab	0	1 (3%)	6 (19%)	7
SAE (unrelated)	0	1 (3%)	0	1 (1%)
AE leading to treatment discontinuation**	0	0	1 (3%)	1 (1%)
AESI - immune-mediated thyroiditis	1 (3%)	0	4 (13%)	5 (5%)
ALT >2xULN through Day 169	4 (14%)	3 (10%)	7 (23%)	14 (15%)
ALT >3xULN through Day 169	0	2 (6%)	3 (10%)	5 (5%)

- VTP-300 and LD nivolumab were both generally well-tolerated.
- Thyroid dysfunction was reported in 8 of 91 (9%) participants; normal TFTs reported in 7 of 8 (88%) at last recorded visit.
- ALT elevations >2xULN occurred in 14 participants through Day 169 (2.1-6.7xULN); Most occur soon after first nivolumab and most revert to <2x ULN by Day 85

LD: low dose; TFT: Thyroid function test; ALT: Alanine aminotransferase; ULN: upper limit of normal.

Interim data - Data cut date April 15, 2024.

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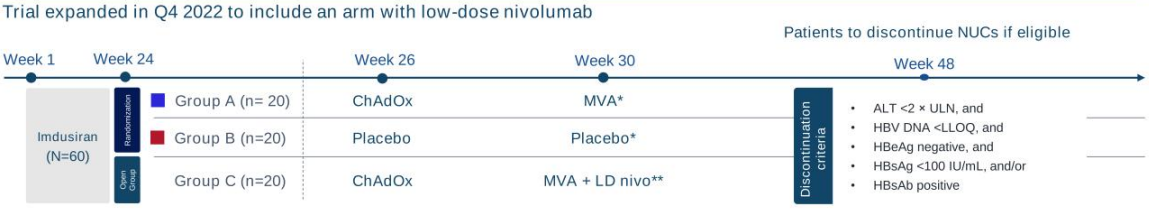
AB-729-202: Phase 2a – Collaboration with Arbutus

Imdusiran (RNAi) + VTP-300 +/- low-dose nivolumab (N=60)

Trial expanded in Q4 2022 to include an arm with low-dose nivolumab



Inclusion Criteria

- HBV DNA ≤20 IU/mL.
- HBsAg ≥100 to <5,000 IU/mL.
- On NUCs for at least 1 year.

Primary Endpoints

- Safety: incidence of AEs and SAEs.

Secondary Endpoints

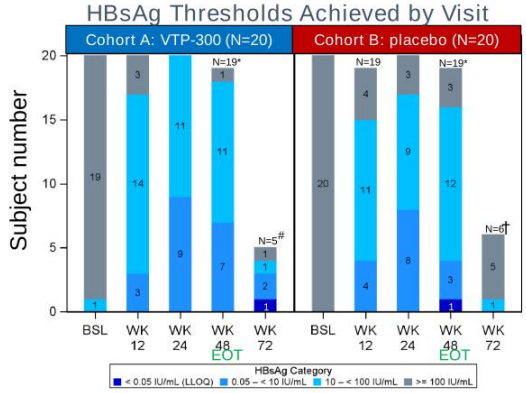
- Change in HBsAg concentration from baseline.
- Proportion of participants with a change in HBsAg from baseline meeting response criteria (≥0.5, 1, 2, or 3 log10 reduction).
- Change in HBV DNA, RNA, core-related antigen, HBsAg antibody, HBsAg e-antibody from baseline.

LD: Low-dose ALT: Alanine aminotransferase; LLOQ: lower limit of quantitation; ULN: upper limit of normal.
* Additional MVA/Placebo to be dosed at Week 38, if patients have experienced a ≥0.5 log drop in HBsAg from Week 26 to Week 34.
** Additional MVA+nivo to be dosed at Week 38, if patients have HBsAg ≥10 IU/mL at Week 34.

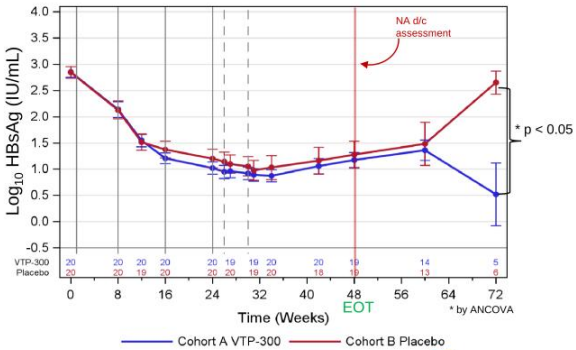
AB-729-202: VTP-300 Maintained Lower HBsAg Levels

- More subjects achieved HBsAg thresholds of <100 IU/mL and <10 IU/mL when administered VTP-300 vs placebo.
- At Week 72 (N=11), there was a significant observed difference in HBsAg levels between the groups.

HBsAg Thresholds Achieved by Visit



Mean [SE] Log_{10} HBsAg Level by Visit



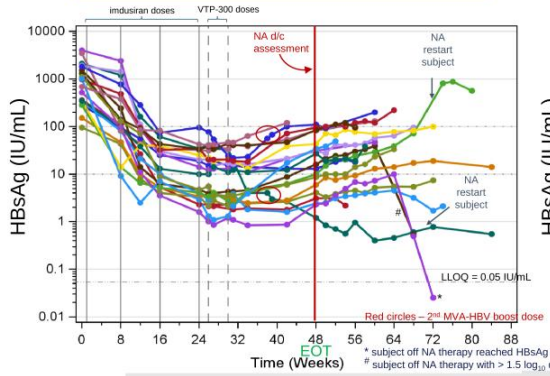
To be presented by Arbutus at EASL on June 6, 2024

BSL=baseline; WK=week; EOT=end of treatment; * 2 subjects did not reach timepoint by datacut; # N=2 and † N=1 subject censored after Week 60 visit due to NA restart

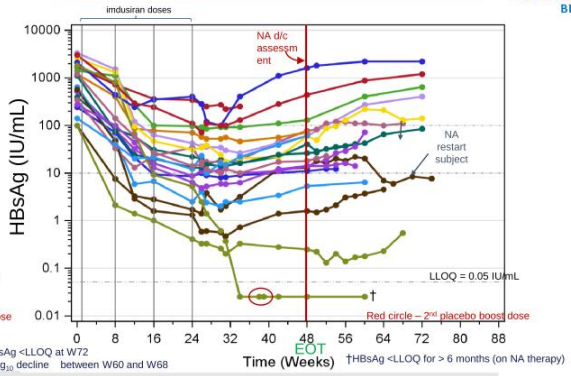
Interim data - data cut-off date April 12, 2024.

AB-729-202: VTP300 Maintained Lower HBsAg Levels Over Time

Group A (VTP-300) Individual Subject HBsAg Declines



Group B (placebo) Individual Subject HBsAg Declines



* subject off NA therapy reached HBsAg <LLOQ at W72
\# subject off NA therapy with > 1.5 $\log_{10}$ decline between W60 and W68
†HBsAg <LLOQ for > 6 months (on NA therapy)

More subjects on VTP-300 have maintained low HBsAg levels after end of treatment (Wk 72):

	HBsAg <100 IU/mL N, (%)		HBsAg <10 IU/mL N, (%)		HBsAg <LLOQ N, (%)	
Study Wk	VTP-300	PBO	VTP-300	PBO	VTP-300	PBO
Week 72	4/5 (80)	1/6 (16.7)	3/5 (60)	0/6 (0)	1/5 (20)	0/6 (0)

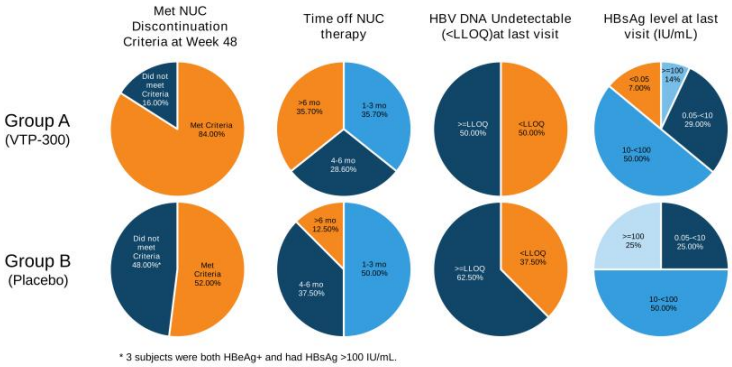
To be presented by Arbutus at EASL on June 6, 2024

Interim data - data cut-off date April 12, 2024.

AB-729-202: VTP-300 Group More Likely to Meet NUC Discontinuation Criteria

VTP-300

Arbutus BIOPHARMA



* 3 subjects were both HBeAg+ and had HBsAg >100 IU/mL.

- More subjects with VTP-300 (84%) met NUC discontinuation criteria vs. placebo:
  - More VTP-300 subjects have maintained HBV DNA undetectable (50%) than placebo subjects (38%).
  - 1 VTP-300 subject reached HBsAg undetectable at Week 72 after > 2 log decline between Week 64 and 72, another has > 1 log decline between Week 60 & 68.

AB-729-202: Imdusiran, VTP-300 & NUC Discontinuation Well-Tolerated

VTP-300

Arbutus BIOPHARMA

Subjects, N (%) [Events]	Imdusiran Lead-in (N=40)	Group A VTP-300 (N=20)	Group B Placebo (N=20)	Study Total (N=40)
Any TEAE	22 (55%) [44]	12 (60%) [22]	12 (60%) [24]	30 (75%) [90]
Treatment-related TEAEs				
Imdusiran	4 (10%) [8]	1 (5%) [1]	0	5 (12.5%) [9]
VTP-300	N/A	4 (20%) [6]	N/A	4 (10%) [6]

NUC Discontinuation Period:	Group A N=19	Group B N=19	Total N=38
Did not meet NUC stopping criteria:	3/19	9/19	12/28
HBeAg+	2/3	9/9*	11/12*
HBsAg > 100 IU/mL	1/3	3/9*	4/12*
Met NUC restart criteria#	2/16	2/10	4/26†

- Most common treatment-related TEAEs in 2 or more subjects (all Grade 1 or 2):
  - VTP-300: injection site-related (redness, pain or reaction in 3 events in 2 subjects)
  - Imdusiran: injection site-related (bruising or swelling in 2 subjects), ALT increased in 2 subjects.
- No SAEs or treatment discontinuations have been reported.
- NUC discontinuation was well-tolerated:
  - Only 1 subject had ALT >2xULN while off NUC treatment in context of HBV DNA elevation that spontaneously reversed without treatment and led to HBsAg undetectable.
  - Subjects who required NUC restart had maximal ALT of 80 U/L prior to restart.

VTP-300 Interim Trials Overview

HBV003 – Phase 2b

- VTP-300 and LD nivolumab treatment generally well-tolerated in all groups.
- In patients with HBsAg baseline <200 IU/mL and Day 169 visit across all groups, a **≥0.5 log HBsAg** reduction was observed in 62% (13) of participants, with 19% (4) becoming HBsAg undetectable.
- 76% of participants were eligible for NUC discontinuation
- 5 of the 7 patients who discontinued are still off NUC therapy, up to 44 weeks in 1 case
- Preliminary data support administration of additional doses of VTP-300 that we believe have the potential to sustain strong T cell responses to enhance rates of HBsAg loss.

AB-729-202 – Phase 2a[1]

- Imdusiran followed by VTP-300 was generally well-tolerated.
- Imdusiran and VTP-300 led to maintenance of lower HBsAg levels during the follow-up period.
- NUC discontinuation was achieved in the majority of patients, with significantly more meeting the discontinuation criteria in the VTP-300 group.
- 2 of 38 subjects have reached HBsAg undetectable to date, and a third subject has had >1.5 log10 decline in the last 8 weeks of follow-up off NUC.

Next anticipated presentation for both trials:

Q4 2024

[1]To be presented by Arbutus at EASL on June 6, 2024

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VTP-1000

Immune Tolerance Program

BARINTHUS BIOTHERAPEUTICS

Guiding the immune system to cure disease

Celiac Disease is a Serious Autoimmune Disease with No Effective Treatment Except Strict Gluten-Free Diet

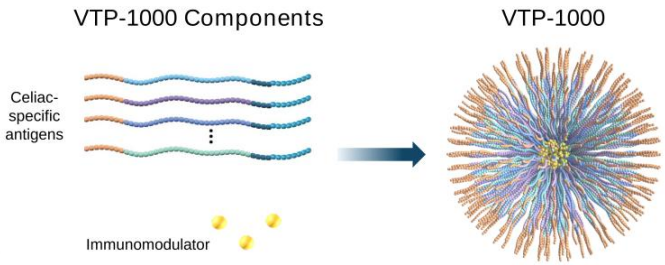
VTP-1000 aims to restore immune balance in a precise, celiac-specific manner.

- Celiac disease is a chronic autoimmune disorder triggered by gluten protein that damages the small intestine and can cause long-lasting digestive problems.

VTP-1000 is designed to balance the immune response: inducing gluten-specific Tregs and reducing gluten-specific Teff response.

- VTP-1000 aims to induce tolerance to gluten protein and allow people with celiac disease to consume a normal diet without having to avoid gluten.

0	Current FDA approved treatments.
~1%	Of people in Western countries have Celiac Disease.[1]
~60%	Of patients are not able to adhere to a strict Gluten-Free Diet. [2]
~20%	Of patients are Non-Responsive Celiac Disease patients. [3]

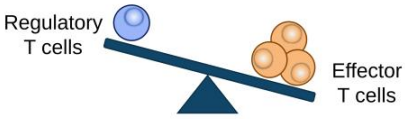


[1] Al-Toma, A., et al. (2019) United European Gastroenterol J. 7(5), 583-613.
[2] Rubin, G., et al. (2009) Aliment Pharmacol Ther. 30(4), 315-330.
[3] Leffler, DA., et al (2007) Clin Gastroenterol Hepatol. 5(4),445-450.

SNAP-Tolerance Immunotherapy (TI) Platform

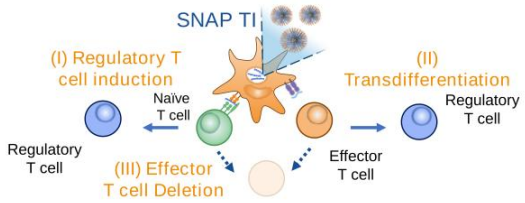
SNAP-TI Aims to Restore Immune Tolerance

Autoimmune diseases occur due to an imbalance between antigen-specific regulatory T cells and proinflammatory effector T cells



Current therapeutic approaches including broad immunosuppression do not address underlying disease and can include severe side effects

SNAP-TI aims to restore Treg/Teff balance in a precise, disease-specific manner



SNAP-TI Key Design Features

Optimal design
- Self assembling 20nm NP
- Large loading capacity of a broad range of antigens

Lymph Node Targeting
- Can optimally access APCs
- Key for T cell immunity

Immunomodulator
- Enhanced Treg/Teff ratio
- Improved safety: prevents antigen associated toxicity

IM/SQ ROA
- Key for patient compliance

NP: nanoparticle; APC: antigen presenting cells; IM/SQ ROA: Intramuscular/Subcutaneous route of administration.

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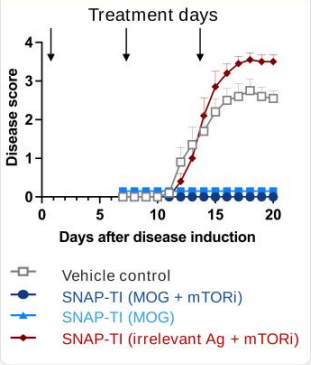
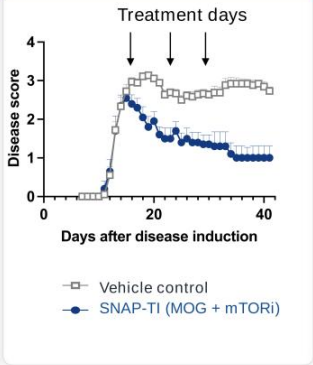
SNAP-TI Ameliorates Disease by Increasing Treg:Teff Ratio

Pre-Clinical Results in EAE, a mouse model of Multiple Sclerosis:

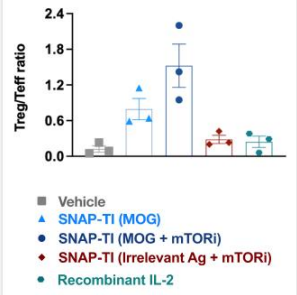
Protection against disease onset[1]



Reversed established disease[1]



Increased Treg:Teff ratio[1]



Efficacy is antigen-specific (T cell mediated)

Protection against re-challenge suggests immune memory

mTOR inhibitor:

- improves Treg:Teff ratio
- prevents toxicity associated with exposure to disease antigen
- prevents Anti-drug Abs

Moa and disease amelioration observed in multiple CD4- (e.g., MS) and CD8- (e.g., T1D) driven mouse disease models

[1] Unpublished preclinical data, Barinthus Bio, Data on File.

EAE: Experimental autoimmune encephalomyelitis
MOG: myelin oligodendrocyte glycoprotein
mTORi: mechanist target of rapamycin

MS: Multiple sclerosis
T1D: Type 1 diabetes

GLU001: Phase 1 – Study Design

Objective: Evaluating safety and tolerability of single and multiple doses of VTP-1000

Part A – Single Ascending Dose (N=18)

Part B – Multiple Ascending Dose (N=24)

- Sequential dosing levels: 7-day gap from first 2 participants at each level and safety review before escalation to next dosing level.

Dose Levels	VTP-1000 (Part A/B)	Placebo
1	N=4/6	N=2
2	N=4/6	N=2
3	N=4/6	N=2

Key Inclusion Criteria

- Diagnosis of celiac disease.
- Well-controlled, gluten restricted diet ≥12 months.

Key Primary Endpoints

- Safety: incidence of AEs and SAEs.
- Changes from baseline in anti-tissue transglutaminase immunoglobulin A antibodies.

Key Secondary Endpoint

- Pharmacokinetic parameters.

Next anticipated milestone:

First Patient, First Dose: Q3 2024

Study Reference: NCT06310291

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VTP-200

Human Papillomavirus (HPV) Therapeutic

BARINTHUS BIOTHERAPEUTICS

Guiding the immune system to cure disease

Persistent HPV Infection Remains a Significant Public Health Problem[1]

We are targeting persistent HPV infection – which can lead to precancerous lesions and cervical cancer[1]

HPV is the most common sexually transmitted viral infection in the world[1]

Cervical cancer was the 4th most common cancer in women globally in 2020. [2] >95% of cervical cancer is caused by HPV.[2]	~291 million women worldwide are infected with HPV[4] >3.6M diagnosed annually with persistent high-risk cervical HPV in US and across 5EU.[6]	Cervical cancer in the US[3]: ~4,000 deaths per year even with screening & treatment ~12,000 cases per year	Cervical cancer worldwide[2]: ~342,000 deaths per year ~604,000 cases per year

VTP-200 aims to address high unmet need for patients with persistent HPV infection

- While HPV prophylactic vaccines are effective at preventing infection, there are low vaccination rates exist in many regions of the world and these vaccines do not eliminate existing infections.[1]
- Standard of care is monitoring and excision once high-grade lesions develop.[1]
- Currently no treatment before high-grade lesions develop.[1]
- People with HPV infections report cancer-related fear, worry over lack of treatment and HPV being a **'ticking time bomb'**.[5]

[1] WHO, HPV vaccines: WHO position paper, 2022
[2] WHO, Cervical Cancer
[3] Center for Disease Control
[4] Lancet Infect Dis. 2007 Jul;7(7):453-9. 10.1016/S1473-3099(07)70158-5
[5] Psychooncology. 2021 Jan; 30(1): 84–92. doi: 10.1002/pon.5540
[6] Barinthus Bio, Data on File

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APOLLO (HPV001) – Phase 1b/2 Study Design

Lead-in Phase: (N=9)

Objective: Evaluating VTP-200 immunogenicity and safety

Regions	EU / UK
Group A (n=3)	ChAdOx 2 x 10^8 vp MVA 1 x 10^7 pfu
Group B (n=3)	ChAdOx 2 x 10^9 vp MVA 1 x 10^7 pfu
Group C (n=3)	ChAdOx 2 x 10^{10} vp MVA 1 x 10^8 pfu

Main Phase*: VTP-200 (N=99) – Complete

Objective: Evaluating safety data, efficacy data, immunogenicity, dose-response

Group	Day 1	Day 29
1 (n=16)	ChAdOx 2 x 10^9 vp	MVA 1 x 10^7 pfu
2 (n=16)	ChAdOx 2 x 10^{10} vp	MVA 1 x 10^7 pfu
3 (n=8)	ChAdOx 2 x 10^8 vp	MVA 1 x 10^8 pfu
4 (n=8)	ChAdOx 2 x 10^9 vp	MVA 1 x 10^8 pfu
5 (n=16)	ChAdOx 2 x 10^{10} vp	MVA 1 x 10^8 pfu
6 (n=32)	Placebo	Placebo

60 of the main phase participants will be part of an immunogenicity sub-study

Inclusion Criteria

- High risk HPV positive for >6 months and low-grade cervical lesions.

Primary Endpoint

- Safety: incidence of AEs and SAEs.

Secondary Endpoints

- Efficacy.
- Dose determination for further studies.

Study Outputs

- Efficacy Data: % clearance of high-risk HPV and cervical lesions evaluated at 12 months.

AE: adverse events, SAE: serious adverse events.
*All groups open simultaneously
Study Reference: NCT04607850

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APOLLO Trial Primary Endpoint Met - Analysis Ongoing

APOLLO (HPV001):
Phase 1b/2 Topline Final Data

- Primary endpoint met: VTP-200 was generally well-tolerated and administered with no treatment-related grade 3 or higher unsolicited AEs and no treatment-related SAEs.
- Highest high-risk (hr)HPV clearance rate (60%) observed in Group 2, which included the highest dose of ChAdOx.
- Highest cervical lesion clearance rate (67%) observed in Group 2 and Group 5, both received the highest dose of ChAdOx.
- Pooled data from the five active dose groups showed no significant improvement in hrHPV clearance or cervical lesion clearance rates in comparison to the placebo group.

		Month 12 hrHPV clearance	Month 12 Cervical lesion clearance*
Group	1	12%	40%
	2	60%	67%
	3	11%	20%
	4	33%	33%
	5	36%	67%
	Placebo	33%	39%

Next anticipated readout:
Analysis - Ongoing

AE: adverse events, SAE: serious adverse events.
* in participants with both reported lesions at screening and visualization of the cervical transformation zone at 12 months (n=57).

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VTP-850

Prostate Cancer Therapeutic

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Guiding the immune system to cure disease

Prostate Cancer Remains a Health Priority with High Diagnosis and Recurrence Rates

VTP-850 is a next generation ChAdOx-MVA multi-antigen product candidate designed to induce disease-relevant cytotoxic T cells and prevent advancement to metastatic disease.

Prostate cancer is the 4th most common cancer diagnosis in the world.[1]	Prostate cancer worldwide[3]:	
1 in 8 men will be diagnosed with prostate cancer in their lifetime.[2]	~1.4M	new cases diagnosed.
20-40% of patients with non-metastatic prostate cancer experience biochemical recurrence after local therapy (e.g., prostatectomy).	~375K	deaths per year.

VTP-850 is a novel immunotherapy candidate aiming to prevent advanced disease.

- Biochemical recurrence is indicated by rising PSA levels with no evidence of disease on conventional imaging, meaning the disease was not cured by local therapy.[4]
- Treatment options for patients with biochemical recurrence include systemic therapies such as hormonal or chemotherapy, resulting in toxicity and side effects.

[1] WHO, 2022.
[2] American Cancer Society, 2023
[3] World Cancer Research Fund International. 2020.
[4] Simon Ni, et al. Am Soc Clin Oncol Educ Book. 2022.
PSA: Prostate Specific Antigen.
Study Reference: NCT05617040

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VTP-800 First-Generation Single-Antigen Immunotherapy Showed Meaningful Reduction in PSA

Phase 2a ADVANCE: VTP-800 + Anti-PD-1 in mCRPC

Study in metastatic castration-resistant prostate cancer (mCRPC) patients using ChAdOx-MVA plus nivolumab

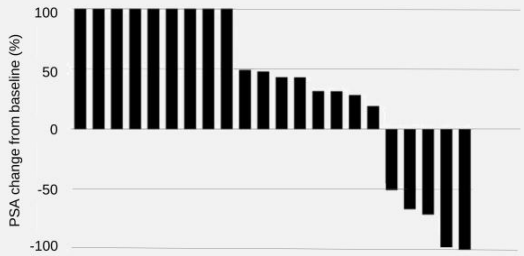
VTP-800 antigen: 5T4

Target patient population: 23 mCRPC patients enrolled.

Efficacy data readouts:

- >50% reduction in PSA compared to baseline was seen in 22% of patients (5/23).
- Historical comparator with a PSA response to anti-PD-1 alone is ~9%.[1]
- 3 patients with PSA response also had measurable tumors and achieved clinical responses.

Phase 2 ADVANCE:
Serum PSA Results[2]



mCRPC: metastatic castration-resistant prostate cancer; PSA: prostate-specific antigen.
[1] Antonarakis, E. et al. Journal of Clinical Oncology 2020
[2] Data courtesy of Prostate Cancer Vaccine Group, Jenner Institute, UO. mCRPC: Metastatic Castrate Resistant Prostate Cancer

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PCA001 – Phase 1/2 Study of VTP-850 Design

Ongoing Phase 1/2 study for Multi-Antigen VTP-850, a Next-Generation Candidate, Futility Data Expected 2025

Phase 1: Lead-in Phase

VTP-850 (N=15-18)

Objective: Dose finding for Phase 2, evaluation of safety and immunogenicity.

VTP-850 antigens:

- 5T4
- PSA
- PAP
- STEAP

Cohort 1 Low dose	(n=3-6) IM/IM	
Cohort 2 Full dose	(n=6) IM/IM	
Cohort 3 Full dose	(n=6) IM/IV	

Phase 2: Main Phase

VTP-850 (N=125)

Objective: Futility analysis, POC, durability of response rate.

Stage 1 objective:

Futility analysis based on PSA response.

(n=25*)

Dosing: IM + IM/IV+

Stage 2 objective:**

Establish proof of concept based on overall PSA response and duration of response.

(n=100)

Dosing: IM + IM/IV+

Inclusion Criteria

- Hormone sensitive prostate cancer.
- Biochemical recurrence after definitive local therapy.
- No metastases by standard radiography.

Primary Endpoints

- Safety: incidence of AEs and SAEs.

Secondary Endpoints

- PSA response, durability of PSA response, duration of PSA response, metastasis-free survival, time to metastasis, time to start of androgen deprivation therapy.

* Including 6 participants from Phase 1. ** If 4 or more of the 25 participants at the RP2R (including the Phase 1 participants who received the same dose regimen) have a PSA response, Stage 2 will be opened to enrolment of up to 100 additional participants.
+ Dosing dependent on outcome of Phase 1.
Study Reference: NCT05617040

Next anticipated milestone:

Futility data: 2025

Partnered Pipeline

Guiding the immune system to cure disease

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Barinthus Bio's Partnered Pipeline

Program	Product Candidate		Partner	Preclinical	Phase 1	Phase 2	Phase 3	Barinthus Bio Rights	Status/Anticipated Upcoming Milestones
Cancer Programs	VTP-600 ✓	NSCLC/Squamous Esophageal cancer therapeutic in combo. with checkpoint inhibitor + chemo	Ludwig Cancer Research, Cancer Research UK					Worldwide (76% of Sub.)	Phase 1/2a ongoing
Prophylactic Programs	VTP-500 ✓	MERS	University of Oxford, CEPI					Worldwide	Initiation of Phase 2
	VTP-400 ✓	Zoster	CanSinoBIO					Worldwide (excl. China)	Phase 1 ongoing

✓ Existing human clinical data

ChAdOx | ChAdOx + MVA

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Company Highlights

Guiding the immune system to cure disease

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Financial Overview and Catalysts

Guiding the immune system to cure disease

Current cash position

$130 million[1] as of March 31, 2024.

No debt or outstanding warrants.

Estimated cash runway into Q4 2025[3].

Expected near-term catalysts[2]

Q3 2024 ▶ VTP-1000 (Celiac): Phase 1 GLU001 FPFV

Q4 2024 ▶ VTP-300 (HBV): Phase 2b interim analysis & Phase 2a interim results (Q4 2024)

[1] Including cash, cash equivalents and restricted cash as of March 31, 2024, as reported on Form 10-Q on May 13, 2024.
[2] Based on management's current estimates on expected clinical data milestones.
[3] Based on management's current estimate of status and strategy. Any changes could be material.

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Investment Highlights

- Proprietary platforms (ChAdOx, MVA, SNAP) designed to drive powerful immune responses in therapeutic and prophylactic settings.
- Focused pipeline of 4 key programs in chronic infectious disease, autoimmunity and cancer.
- Multiple anticipated near-term data readouts from 2 Phase 2 trials, an ongoing Phase 1 trial and initiation of Phase 1 with novel SNAP-TI platform.
- Ongoing partnerships in 3 programs with leading institutions and biotech companies.
- Expanding into autoimmunity with targeted immunotherapies in high unmet need areas with no current treatment, such as Celiac disease.

Guiding the Immune System to Cure Disease

Thank You

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