Vaccitech to Present Positive Final Data at EASL Congress for Phase 1b/2 HBV002 Study in Adults with Chronic Hepatitis B

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- *Meaningful, durable reductions of HBsAg were seen, both in participants who received VTP-300 alone and in combination with a low-dose PD-1 inhibitor*
- *Two patients developed a non-detectable HBsAg level, which continued eight months after last dose*
- *A robust T cell response was generated and was highest in participants who received VTP-300 alone*
- *VTP-300 led to a decline in HBsAg in adults with chronic Hepatitis B with either genotype B or C viruses. VTP-300-elicited T cells have shown cross-reactivity to HBV core antigen from genotypes A to E in vitro*

OXFORD, United Kingdom, June 21, 2023 (GLOBE NEWSWIRE) -- Vaccitech plc (NASDAQ: VACC), a clinical-stage biopharmaceutical company engaged in the discovery and development of novel immunotherapeutics for the treatment of autoimmunity, chronic infectious diseases and cancer, will present positive final data from the HBV002 clinical trial at the European Association for the Study of the Liver (EASL) Congress 2023 – The International Liver Congress™ taking place June 21-24 in Vienna, Austria. HBV002 (NCT04778904) is a Phase 1b/2a clinical trial of VTP-300 in adults with chronic Hepatitis B (CHB). The data will be presented as a poster at EASL on Saturday, June 24 (Poster ID: SAT-198), by Eleanor Barnes, Professor of Hepatology and Experimental Medicine at Oxford University.

“An effective immune response is likely to be essential to controlling chronic Hepatitis B,” said Meg Marshall, Vaccitech’s Chief Medical Officer. “The durable reductions in HBsAg we saw in this study are exciting because they support the idea that VTP-300 could be a critical component to enhancing rates of functional cure for people with chronic Hepatitis B.”

Meaningful, durable reductions of Hepatitis B Surface Antigen (HBsAg) were seen in all participants with a >0.5 $\log_{10}$ reduction in HBsAg who received VTP-300 alone (Group 2) or in combination with a single administration of low-dose PD-1 inhibitor, nivolumab (Group 3). Two of five patients with baseline HBsAg below 100 IU/mL in Group 3, developed a non-detectable HBsAg level, which continued eight months after last dose. Reductions in HBsAg were most prominent in those with lower baseline HBsAg. Importantly, all participants who received VTP-300 and experienced a >0.5 log10 reduction in HBsAg had durable responses with reductions in HBsAg persisting through to the last measurement eight months post-final dose.

VTP-300, encoding Hepatitis B virus (HBV) genotype C antigens, led to a decline in HBsAg in the majority of people infected with genotypes B and C viruses. In addition, VTP-300-induced T cells showed cross-reactivity to the core antigen from genotypes A to E in ELISpot assays using PBMC from VTP-300-treated healthy subjects and genotype-specific peptides A-E. A robust T cell response was generated against all VTP-300 antigens and was highest in the VTP-300 alone group. In that group, there was a relation between ELISpot responses and HBsAg decline.

“Three hundred million people are estimated to be chronically infected with HBV worldwide,” [1] noted Professor Eleanor Barnes. “Demonstrating cross-reactivity to genotypes B and C in participants, as well as to A-E in healthy subjects, is a promising step to being able to address chronic Hepatitis B infection in as many people as possible.”

About HBV002

HBV002 was an open-label Phase 1b/2 study to evaluate the safety, tolerability and immunology readout (T cell responses) of VTP-300, with or without low-dose nivolumab, in people with CHB who are virally suppressed with oral anti-viral therapies. In the HBV002 study, 55 participants were randomized into four groups to receive combinations of VTP-300 and low-dose nivolumab, with follow-up for eight months post-final dose.

VTP-300 as monotherapy and in combination with low-dose nivolumab was administered with no treatment-related serious adverse events. As reported previously, two out of 55 participants experienced transaminase flares. Both incidents occurred in participants with HBsAg declines, but not in any of the participants who cleared HBsAg (<0.05 IU/mL).

Group 2

Meaningful, durable reductions of HBsAg were seen in Group 2 (receiving VTP-300 monotherapy, N=18). Three participants had 0.7, 0.7, and 1.4 $\log_{10}$ declines two months post-final dose, with durable responses continuing eight months post-final dose. These participants all had baseline HBsAg <50 IU/mL.

A robust T cell response was generated and was highest in this group and there was a relation demonstrated between ELISpot response and HBsAg decline.

Group 3

Those in Group 3 received VTP-300 followed by a single low dose of nivolumab together with Modified Vaccinia Ankara (MVA)-HBV (N=18). Two

months post-final dose, the mean reduction in HBsAg was 0.76 $\log_{10}$ ($p<0.001$). This effect persisted with a mean decline of 0.98 $\log_{10}$ at eight months ($p<0.001$) after the last dose and was most prominent with starting values HBsAg <1,000 IU/mL. Two participants developed non-detectable HBsAg levels, which continued eight months after last dose.

Pre-genomic RNA levels fell significantly in the majority of participants in this group only, consistent with the decline in HBsAg levels.

Groups 1 and 4

No meaningful reductions in HBsAg were observed in Group 1, in which participants received two doses of MVA-HBV without ChAdOx1-HBV, or in Group 4, in which participants received low-dose nivolumab with both doses of VTP-300. These groups were discontinued following interim analysis, as previously announced in June 2022.

Underlying data can be found in the full poster, which can be accessed here.

A Phase 2b clinical trial (HBV003; NCT05343481) to evaluate timing of the low dose nivolumab, additional doses of the MVA component of VTP-300 and a nucleos(t)ide analogues discontinuation protocol, has been initiated in multiple countries across the Asia-Pacific region, with over 40% of the 120 participants enrolled to date (40 per group) and interim data expected in Q4 2023. In addition, a Phase 2a clinical trial (ACTRN12622000317796), in collaboration with Arbutus Biopharma Corporation, is evaluating the safety, antiviral activity and T cell responses of VTP-300 administered after Arbutus' AB-729 in 40 virologically-suppressed people with chronic HBV infection, with interim data expected in Q4 2023.

About VTP-300

VTP-300 is an investigational immunotherapeutic candidate consisting of an initial dose using the ChAdOx platform and a secondary dose(s) using MVA, both encoding multiple hepatitis B antigens, 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. Vaccitech 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.

About Hepatitis B

Globally it is estimated that there are more than 300 million people, including up to 2.4 million in the U.S. and 14 million in Europe, living with chronic HBV infection.[1,2] Prevalence is highest in East Asia and Africa.[3] Fewer than 10% of people with chronic HBV infection will achieve a functional cure by using existing therapies.[4] Approximately 820,000 people die each year from hepatitis B and related complications, such as liver cirrhosis and hepatocellular carcinoma.[2] Hepatitis B diagnosis rates remain low, and as of 2019, only an estimated 10.5% of all those infected were aware of their infection.[2] As a result of low diagnosis rates and strict treatment eligibility guidelines, in 2019 only an estimated 6.6 million of the people with chronic Hepatitis B were on treatment.[2]

About Vaccitech

Vaccitech is a clinical-stage biopharmaceutical company focused on the development of novel T cell immunotherapeutics designed to utilize the power of the immune system to treat and cure chronic infectious diseases, autoimmune diseases, and cancer. The company stands apart through a proprietary, multi-platform approach that has shown the ability to induce higher magnitudes of T cells compared with other technologies. Vaccitech is uniquely positioned to address the needs of large, underserved patient populations through a diverse clinical-stage pipeline of investigational therapies targeting life-threatening diseases that pose significant public health risk and have limited treatment options. The company's lead product candidates include VTP-300, an immunotherapy candidate designed as a component of a potential functional cure for chronic hepatitis B viral (HBV) infection; VTP-200, a non-invasive, early-stage investigational treatment for persistent, high-risk human papillomavirus (HPV); VTP-850, a novel T cell investigational therapy for prostate cancer; and VTP-1000, a preclinical T cell therapeutic candidate for immune tolerance in celiac disease. Vaccitech has proven drug development and scientific expertise in the field of immunization, co-inventing a COVID-19 vaccine with the University of Oxford, which is now approved and exclusively licensed worldwide to AstraZeneca. For more information, visit www.vaccitech.co.uk.

Forward Looking Statements

This press release contains forward-looking statements, 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: the Company's plans and strategy with respect to VTP-300 and the HBV002 clinical trial, and the potential benefits of VTP-300 for the treatment of chronic HBV. Any forward-looking statements in this press release are based on 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 the Company's product development activities and planned and ongoing clinical trials, the Company's ability to execute on its strategy, regulatory developments, the Company's ability to fund its operations, global economic uncertainty, including disruptions in the banking industry, the impact that the COVID-19 pandemic may have on the Company's clinical trials and preclinical studies, and access to capital and other risks identified in the Company's filings with the Securities and Exchange Commission (the "SEC"), including its Annual Report on Form 10-K for the year ended December 31, 2022, its Quarterly Reports on Form 10-Q and subsequent filings with the SEC. The Company cautions you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. The Company expressly disclaims 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.

References

1. Hepatitis B Foundation, What is Hepatitis B?, 2023.
2. WHO, Hepatitis B, 2022.

3. Centers for Disease Control and Prevention. CDC Yellow Book 2020: Health Information for International Travel. New York: Oxford University Press; 2019.

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