GSK and Vir Biotechnology announce sotrovimab (VIR-7831) receives Emergency Use Authorization from the US FDA for treatment of mild-to-moderate COVID-19 in high-risk adults and paediatric patients

PUBLISHED MAY 26, 2021
BY GSK

For media and investors only

Issued: London UK and San Francisco US

- Treatment with sotrovimab resulted in an 85% reduction in the risk of hospitalisation or death in high-risk adult outpatients compared to placebo, based on interim results from Phase 3 COMET-ICE trial

- In vitro data indicate sotrovimab maintains activity against all known variants of concern, including the variant from India

- Sotrovimab will be available for appropriate patients diagnosed with COVID-19 in the U.S. in the coming weeks

- Discussions with global regulators regarding authorisations in additional countries continue to advance

GlaxoSmithKline plc (LSE/NYSE: GSK) and Vir Biotechnology, Inc. (Nasdaq: VIR) today announced the U.S. Food and Drug Administration (FDA) granted an Emergency Use Authorization (EUA) for sotrovimab (previously VIR-7831), an investigational single-dose monoclonal antibody, for the treatment of mild-to-moderate COVID-19 in adults and paediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19,

including hospitalisation or death.

Adrienne E. Shapiro, M.D., Ph.D., an infectious disease specialist at Fred Hutchinson Cancer Research Center and investigator in the COMET-ICE trial, said:

> Monoclonal antibodies like sotrovimab are potentially one of our most effective tools for fighting COVID-19. While preventive measures, including vaccines, can reduce the total number of cases, sotrovimab is an important treatment option for those who become ill with COVID-19 and are at high risk – allowing them to avoid hospitalisation or worse.

George Scangos, Ph.D., Chief Executive Officer of Vir, said:

> Our distinctive scientific approach has led to a single monoclonal antibody that, based on an interim analysis, resulted in an 85% reduction in all-cause hospitalisations or death, and has demonstrated, in vitro, that it retains activity against all known variants of concern, including the emerging variant from India. I believe that sotrovimab is a critical new treatment option in the fight against the current pandemic and potentially for future coronavirus outbreaks, as well. At Vir, our aim is not only to deliver a clinically effective therapy for COVID-19, but also to provide effective therapy against SARS-CoV-2 variants and potential pandemics of tomorrow.

Dr Hal Barron, Chief Scientific Officer and President R&D, GSK, said:

> The fast pace of COVID-19 vaccinations in the U.S. is encouraging, yet, despite these aggressive efforts, there is still a need to help prevent infected patients from developing complications. In just over a year since starting our collaboration and in less than 10 months since beginning clinical trials, we are delighted that, as of today, the benefits of this unique monoclonal antibody will now be available to patients in need.

Sotrovimab has been granted an EUA by the FDA to facilitate the availability and use of this investigational monoclonal antibody for the treatment of COVID-19 in the U.S. while the pandemic remains a public health emergency. The FDA Fact Sheet for Healthcare Providers regarding the emergency use of sotrovimab reflects the

recently updated definition of high risk for COVID-19 to include additional medical conditions and factors associated with increased risk for progression to severe disease. The EUA for sotrovimab also includes post-authorisation commitments as specified in the Letter of Authorization.

Sotrovimab is continuing to be studied in ongoing clinical trials. An analysis of safety and efficacy data at day 29 for the full population from the COMET-ICE trial is expected as early as the first half of 2021. GSK and Vir plan to submit a Biologics License Application (BLA) to the FDA in the second half of 2021.

Evidence of Sotrovimab's Profound Clinical Efficacy

The EUA was granted to sotrovimab based on an interim analysis of efficacy and safety data from the Phase 3 COMET-ICE (COVID-19 Monoclonal antibody Efficacy Trial – Intent to Care Early) trial in high-risk adult outpatients, which was stopped early by an independent data monitoring committee in March 2021 due to evidence of profound clinical efficacy. As previously announced, interim study results demonstrated an 85% (p=0.002) reduction in hospitalisation for more than 24 hours or death in those receiving sotrovimab compared to placebo, the primary endpoint of the trial. The most common adverse events observed in the sotrovimab treatment group in COMET-ICE were rash (2%) and diarrhoea (1%), all of which were Grade 1 (mild) or Grade 2 (moderate). No other treatment-emergent adverse events were reported at a higher rate with sotrovimab compared to placebo. The EUA includes a warning for hypersensitivity including anaphylaxis and infusion-related reactions.

In Vitro Data Indicate Sotrovimab Maintains Activity Against All Known Variants of Concern

Sotrovimab targets a conserved epitope of the spike protein that is less likely to mutate over time. The EUA submission also included data from published in vitro studies, which demonstrated that sotrovimab maintains activity against all known circulating variants of concern, including the variants from Brazil (P.1), California (B.1.427/B.1.429), India (B.1.617), New York (B.1.526), South Africa (B.1.351) and the UK (B.1.1.7). GSK and Vir will continue to evaluate the ability of sotrovimab to maintain activity against new and emerging variants. The clinical impact of these in vitro variant data is not yet known. Data collection and analysis is still ongoing.

GSK and Vir's Commitment to Patient Access to Sotrovimab

GSK and Vir are actively working with government agencies around the world to make sotrovimab available to patients in need of treatment.

- On 21 May 2021, the European Medicines Agency's (EMA) Committee for Human Medicinal Products (CHMP) issued a positive scientific opinion following the referral of sotrovimab to the CHMP under Article 5(3) of Regulation 726/2004. The opinion relates to the use of sotrovimab for the treatment of adults and adolescents (aged 12 years and over and weighing at least 40 kg) with COVID-19 who do not require oxygen supplementation and who are at risk of progressing to severe COVID-19.

- The EMA has also started a rolling review of data on sotrovimab that will continue until enough evidence is available to support the filing of a formal marketing authorisation application.

- In April, Health Canada initiated a review of sotrovimab under the expedited Interim Order application pathway for COVID-19 drugs.

- GSK and Vir are continuing discussions with other global regulators on the regulatory pathways available so that sotrovimab can be made available to patients with COVID-19 as soon as possible.

About the COMET-ICE Study Design

The multi-center, double-blind, placebo-controlled, Phase 3 COMET-ICE trial investigated intravenous (IV) infusion of sotrovimab in adults with mild or moderate COVID-19 at high risk of progression to severe disease.

This ongoing trial evaluated the safety and efficacy of a single IV infusion of sotrovimab (500 mg) or placebo in non-hospitalised participants globally. The safety of sotrovimab is primarily based on an interim analysis from 868 patients (430 patients in the treatment arm and 438 in the placebo arm) through day 15. Among those studied, 63% were Hispanic or Latino and 7% were Black or African American. According to the Centers for Disease Control and Prevention, these populations are approximately three times more likely to be hospitalised and approximately two times more likely to die

of COVID-19. The primary efficacy endpoint was the proportion of patients who have progression of COVID-19 as defined by the need for hospitalisation for greater than 24 hours for acute management of illness or death.

In March 2021, an Independent Data Monitoring Committee recommended that the COMET-ICE trial be stopped for enrolment due to evidence of profound efficacy.

About the Sotrovimab Clinical Development Program

In addition to the COMET-ICE trial, the full COMET clinical development program for sotrovimab includes:

- COMET-PEAK: An ongoing Phase 2 trial with two parts: to compare the safety and viral kinetics of 500 mg intramuscularly (IM) administered sotrovimab to 500 mg intravenously administered sotrovimab among low-risk adults with mild to moderate COVID-19 and to evaluate the similarity in pharmacokinetics between sotrovimab manufactured by different processes

- COMET-TAIL: A Phase 3 trial expected to begin in the second quarter of 2021 as an early treatment for COVID-19 in high-risk adults, to assess whether IM-administered sotrovimab can reduce hospitalisation or death due to COVID-19

- COMET-STAR: A Phase 3 trial expected to begin in the second half of 2021 in uninfected adults at high risk to determine whether IM-administered sotrovimab can prevent symptomatic infection.

Sotrovimab was also evaluated in the outpatient setting in BLAZE-4, a Phase 2 trial sponsored by Eli Lilly and Company, designed to assess the safety and efficacy of bamlanivimab (LY-CoV555) alone and bamlanivimab with other neutralising antibodies, including sotrovimab, versus placebo in low-risk adults with mild to moderate COVID-19. An interim analysis found that bamlanivimab (700 mg) co-administered with sotrovimab (500 mg) demonstrated a 70% relative reduction in patients with persistently high viral load at day 7 compared to placebo, meeting the primary endpoint.

Additionally, sotrovimab, along with VIR-7832 is being evaluated in the Phase 1b/2a National Health Service-supported AGILE trial in adults with mild to moderate COVID-19. VIR-7832 is the second monoclonal

antibody from the Vir-GSK collaboration to be investigated as a potential COVID-19 treatment.

About Sotrovimab (previously VIR-7831)

Sotrovimab is an investigational SARS-CoV-2 monoclonal antibody. Preclinical data suggest it has the potential to both block viral entry into healthy cells and clear infected cells. The antibody binds to an epitope on SARS-CoV-2 that is shared with SARS-CoV-1 (the virus that causes SARS), indicating that the epitope is highly conserved, which may make it more difficult for resistance to develop. Sotrovimab, which incorporates Xencor's Xtend™ technology, also has been designed to achieve high concentration in the lungs to ensure optimal penetration into airway tissues affected by SARS-CoV-2 and to have an extended half-life.

About VIR-7832 / GSK4182137

VIR-7832 is an investigational dual-action SARS-CoV-2 monoclonal antibody. Preclinical data suggest it has the potential to both block viral entry into healthy cells and an enhanced ability to clear infected cells. The antibody binds to an epitope on SARS-CoV-2 that is shared with SARS-CoV-1 (the virus that causes SARS), indicating that the epitope is highly conserved, which may make it more difficult for resistance to develop. VIR-7832, which incorporates Xencor's Xtend and other Fc technologies, has been designed to achieve high concentration in the lungs to ensure optimal penetration into airway tissues affected by SARS-CoV-2 and to have an extended half-life. Importantly, VIR-7832 also has been engineered to potentially enhance virus-specific T cell function, which could help treat and/or prevent COVID-19 infection.

The following is a summary of information for sotrovimab. Healthcare providers should review the Fact Sheets for information on the authorized use of sotrovimab and mandatory requirements of the EUA. Please see the FDA Letter of Authorization, Fact Sheet for Healthcare Providers, and Fact Sheet for Patients, Parents, and Caregivers.

Important Information about Sotrovimab

Sotrovimab has been authorized by the FDA for the emergency use described below. Sotrovimab is not FDA-approved for this use.

Sotrovimab is authorized only for the duration of the declaration that circumstances exist justifying the authorization of the emergency use of sotrovimab under section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner.

The U.S. Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) to permit the emergency use of the unapproved product sotrovimab for the treatment of mild-to-moderate coronavirus disease 2019 (COVID-19) in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death.

Limitations of Authorized Use

Sotrovimab is not authorized for use in patients:

- who are hospitalized due to COVID-19, OR

- who require oxygen therapy due to COVID-19, OR

- who require an increase in baseline oxygen flow rate due to COVID-19 (in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity).

Benefit of treatment with sotrovimab has not been observed in patients hospitalized due to COVID-19. SARS-CoV-2 monoclonal antibodies may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation.

Important Safety Information for Sotrovimab

There are limited clinical data available for sotrovimab. Serious and unexpected adverse events may occur that have not been previously reported with use of sotrovimab.

Hypersensitivity Including Anaphylaxis and Infusion-Related Reactions

Serious hypersensitivity reactions, including anaphylaxis, have been observed with administration of sotrovimab. If signs and symptoms of

a clinically significant hypersensitivity reaction or anaphylaxis occur, immediately discontinue administration and initiate appropriate medications and/or supportive care.

Infusion-related reactions, occurring during the infusion and up to 24 hours after the infusion, have been observed with administration of sotrovimab. These reactions may be severe or life threatening. Signs and symptoms of infusion-related reactions may include: fever, difficulty breathing, reduced oxygen saturation, chills, fatigue, arrhythmia (e.g., atrial fibrillation, sinus tachycardia, bradycardia), chest pain or discomfort, weakness, altered mental status, nausea, headache, bronchospasm, hypotension, hypertension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, vaso-vagal reactions (e.g., pre-syncope, syncope), dizziness and diaphoresis.

Consider slowing or stopping the infusion and administer appropriate medications and/or supportive care if an infusion-related reaction occurs.

Hypersensitivity reactions occurring more than 24 hours after the infusion have also been reported with the use of SARS-CoV-2 monoclonal antibodies under Emergency Use Authorization.

Clinical Worsening After SARS-CoV-2 Monoclonal Antibody Administration

Clinical worsening of COVID-19 after administration of SARS-CoV-2 monoclonal antibody treatment has been reported and may include signs or symptoms of fever, hypoxia or increased respiratory difficulty, arrythmia (e.g., atrial fibrillation, tachycardia, bradycardia), fatigue, and altered mental status. Some of these events required hospitalization. It is not known if these events were related to SARS-CoV-2 monoclonal antibody use or were due to progression of COVID-19.

Limitations of Benefit and Potential for Risk in Patients with Severe COVID-19

Benefit of treatment with sotrovimab has not been observed in patients hospitalized due to COVID-19. SARS-CoV-2 monoclonal antibodies may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation. Therefore, sotrovimab is not

authorized for use in patients who are hospitalized due to COVID-19, OR who require oxygen therapy due to COVID-19, OR who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.

The most common treatment-emergent adverse events observed in the sotrovimab treatment group in COMET-ICE were rash (2%) and diarrhea (1%), all of which were Grade 1 (mild) or Grade 2 (moderate). No other treatment-emergent adverse events were reported at a higher rate with sotrovimab compared to placebo.

Use in Specific Populations

There are insufficient data to evaluate a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcome. Sotrovimab should be used during pregnancy only if the potential benefit justifies the potential risk for the mother and the fetus.

There are no available data on the presence of sotrovimab in human milk, the effects on the breastfed infant, or the effects on milk production. Individuals with COVID-19 who are breastfeeding should follow practices according to clinical guidelines to avoid exposing the infant to COVID-19.

About the Vir and GSK Collaboration

In April 2020, Vir and GSK entered into a collaboration to research and develop solutions for coronaviruses, including SARS-CoV-2, the virus that causes COVID-19. The collaboration uses Vir's proprietary monoclonal antibody platform technology to accelerate existing and identify new anti-viral antibodies that could be used as therapeutic or preventive options to help address the current COVID-19 pandemic and future outbreaks. The companies will leverage GSK's expertise in functional genomics and combine their capabilities in CRISPR screening and artificial intelligence to identify anti-coronavirus compounds that target cellular host genes. They will also apply their combined expertise to research SARS-CoV-2 and other coronavirus vaccines.

GSK Commitment to Tackling COVID-19

GSK's response to COVID-19 has been one of the broadest in the

industry, with three potential treatments in addition to our vaccine candidates in development with partner organisations.

GSK is collaborating with several organisations on COVID-19 vaccines by providing access to our adjuvant technology. In addition to our work with Medicago, we recently announced positive Phase 2 data from our collaboration with Sanofi to develop an adjuvanted, protein-based vaccine candidate and expect to begin a Phase 3 trial in Q2. An earlier stage collaboration with SK Bioscience is also ongoing. SK Bioscience receives funding from CEPI and the Bill and Melinda Gates Foundation to develop differentiated, affordable COVID-19 vaccines for supply globally through the COVAX facility. The use of an adjuvant can be of particular importance in a pandemic since it may reduce the amount of vaccine protein required per dose, allowing more vaccine doses to be produced and contributing to protecting more people. Based on experience with other adjuvanted vaccines, there is potential for increased cross protection against COVID-19 variants which will be further studied.

GSK is also working with mRNA specialist, CureVac, to jointly develop next generation, multi-valent mRNA vaccines for COVID-19 with the potential to address multiple emerging variants in one vaccine. GSK will also support manufacturing of up to 100m doses of CureVac's first generation COVID-19 vaccine. GSK is also providing manufacturing support for up to 60m doses of Novavax' COVID-19 vaccine in the UK.

GSK is also exploring potential therapeutic or treatment options for COVID-19 patients. We are collaborating with Vir Biotechnology to develop existing and identify new anti-viral antibodies that could be used as therapeutic or preventive options for COVID-19. We recently reported that an Independent Data Monitoring Committee recommended that the Phase 3 COMET-ICE trial evaluating sotrovimab as monotherapy for the early treatment of COVID-19 in adults at high risk of hospitalisation be stopped for enrolment due to evidence of profound efficacy, based on an interim analysis of data from the trial. We have received Emergency Use Authorization in the U.S. and are seeking authorisations in other countries. We are also assessing whether an investigational monoclonal antibody, otilimab, can help severely ill COVID-19 patients aged over 70 who experience an overreaction of their immune system.

Vir's Commitment to COVID-19

Vir was founded with the mission of addressing the world's most serious infectious diseases. In 2020, Vir responded rapidly to the COVID-19 pandemic by leveraging our unique scientific insights and industry-leading antibody platform to explore multiple monoclonal antibodies as potential therapeutic or preventive options for COVID-19. Sotrovimab is the first SARS-CoV-2-targeting antibody Vir advanced into the clinic. It was carefully selected for its demonstrated promise in preclinical research, including an anticipated high barrier to resistance and potential ability to both block the virus from entering healthy cells and clear infected cells. Vir is continuing to pursue novel therapeutic and prophylactic solutions to combat SARS-CoV-2 and future coronavirus pandemics, both independently and in collaboration with its partners.

GSK is a science-led global healthcare company with a special purpose: to help people do more, feel better, live longer. For further information please visit www.gsk.com/about-us.

Vir Biotechnology is a clinical-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. Vir has assembled four technology platforms that are designed to stimulate and enhance the immune system by exploiting critical observations of natural immune processes. Its current development pipeline consists of product candidates targeting COVID-19, hepatitis B virus, influenza A and human immunodeficiency virus. For more information, please visit www.vir.bio.

GSK Cautionary Statement Regarding Forward-Looking Statements

GSK cautions investors that any forward-looking statements or projections made by GSK, including those made in this announcement, are subject to risks and uncertainties that may cause actual results to differ materially from those projected. Such factors include, but are not limited to, those described in the Company's Annual Report on Form 20-F for 2020 and any impacts of the COVID-19 pandemic.

Vir Forward-Looking Statements

This press release contains forward-looking statements within the

meaning of the Private Securities Litigation Reform Act of 1995. Words such as “may,” “will,” “plan,” “potential,” “aim,” “promising” and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. These forward-looking statements are based on Vir’s expectations and assumptions as of the date of this press release. Forward-looking statements contained in this press release include, but are not limited to, statements regarding the timing and availability of sotrovimab to providers and patients, the timing and availability of clinical data, program updates and data disclosures related to sotrovimab, the ability of sotrovimab and VIR-7832 to treat and/or prevent COVID-19, the potential of sotrovimab in the hospitalized population, the ability of sotrovimab to neutralize the SARS-CoV-2 live virus, the ability of sotrovimab to maintain activity against all known variants of concern, including the variant from India, and other potential pandemics, statements related to the planned full analysis of the COMET-ICE trial, and statements related to regulatory authorizations and approvals, including plans and discussions with the FDA, EMA and other global regulators. Many factors may cause differences between current expectations and actual results, including unexpected safety or efficacy data observed during preclinical or clinical studies, challenges in the treatment of hospitalized patients, difficulties in collaborating with other companies or government agencies, challenges in accessing manufacturing capacity, successful development and/or commercialization of alternative product candidates by Vir’s competitors, changes in expected or existing competition, delays in or disruptions to Vir’s business or clinical trials due to the COVID-19 pandemic, geopolitical changes or other external factors, and unexpected litigation or other disputes. Other factors that may cause actual results to differ from those expressed or implied in the forward-looking statements in this press release are discussed in Vir’s filings with the U.S. Securities and Exchange Commission, including the section titled “Risk Factors” contained therein. Except as required by law, Vir assumes no obligation to update any forward-looking statements contained herein to reflect any change in expectations, even as new information becomes available.

Data source: U.S. Centers for Disease Control and Prevention: Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity (www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-di...).

Press release distributed by Wire Association on behalf of GSK, on

May 26, 2021. For more information subscribe and follow us.

Media Assets

Embedded Media

Visit the online press release to interact with the embedded media.

https://wireassociation.eu/newsroom/gsk/releases/en/gsk-and-vir-biotechnology-announce-sotrovimab-vir-7831-receives-emergency-use-authorization-from-the-us-fda-for-treatment-of-mild-to-moderate-covid-19-in-high-risk-adults-and-paediatric-patients-1939

GSK

Newsroom: https://wireassociation.eu/newsroom/gsk
Website: https://www.gsk.com/
Primary Email: corporate.media@gsk.com

Social Media

Facebook - https://www.facebook.com/GSK
Twitter - http://twitter.com/GSK
Youtube - http://www.youtube.com/GSK
Linkedin - http://www.linkedin.com/company/glaxosmithkline
Instagram - https://www.instagram.com/gsk/
