AlloVir Initiates Global Phase 3 Registrational Study of Posoleucel for Prevention of Life-Threatening Viral Infections from Six Common Viruses in High-Risk, Allogeneic Hematopoietic Cell Transplant Patients

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Updated, preliminary Phase 2 data presented at EBMT Annual Meeting continue to demonstrate substantial reduction in the expected rate of clinically significant infections with posoleucel therapy

21 of 24 patients were free of clinically significant infections through the Week 14 primary endpoint

WALTHAM, Mass.--(BUSINESS WIRE)--Mar. 22, 2022-- AlloVir (Nasdaq: ALVR), a late-clinical stage allogeneic T-cell immunotherapy company, today announced the initiation of a Phase 3 registrational study of posoleucel, an allogeneic, off-the-shelf, multi-virus-specific T-cell (VST) therapy, for the prevention of clinically significant infections and end-organ diseases from six potentially life-threatening viruses – adenovirus (AdV), BK virus (BKV), cytomegalovirus (CMV), Epstein-Barr virus (EBV), human herpesvirus-6 (HHV-6) and JC virus (JCV) – in high-risk allogeneic hematopoietic cell transplant (allo-HCT) patients. The global, multi-center, randomized, double-blind, placebo-controlled study will enroll approximately 300 adult and pediatric patients and will evaluate the number of clinically significant infections or episodes of end-organ disease through the primary endpoint of the 14-week dosing interval. Safety and efficacy will continue to be followed through Week 26.

Posoleucel has the potential to fundamentally transform the treatment landscape for allo-HCT by preventing life-threatening viral diseases and infections, either as a prophylactic therapy in high-risk patients or as a preemptive therapy in patients who have already reactivated one or more of the six viruses targeted by posoleucel. As 90% of allo-HCT patients reactivate at least one of these viruses, there is a large global market opportunity for the prevention of devastating viral diseases, with an estimated addressable patient population of 40,000 allo-HCT patients annually.

Initial Phase 2 data supporting the use of posoleucel to prevent life-threatening infections from six common viruses following allo-HCT were presented in December 2021, at the American Society for Hematology conference. An update to this dataset that includes more patients and longer follow-up, was shared today in an oral presentation (Abstract #OS04-04) at the 48th Annual Meeting of the European Society for Blood and Marrow Transplantation (EBMT). Out of 26 patients who received at least one dose of posoleucel in the ongoing Phase 2 trial, and including those who completed, discontinued or are continuing posoleucel, only three clinically significant infections were observed through Week 14, as of the data cut-off for this analysis. Of the 24 patients who have reached the Week 14 primary endpoint, 21 remained free of clinically significant infections. Repeat dosing was generally well-tolerated. Final results of the Phase 2 study are expected to be available at the end of this year.

“Hematopoietic cell transplantation leaves patients at high risk for multiple viral infections or disease that cause patients significant suffering, prolonged hospitalization, and threaten the graft and patient survival. These viral infections are all too common, with two-thirds reactivating multiple viruses in the first 100 days post-transplantation,” said Sanjeet Dadwal, M.D., Chief, Division of Infectious Diseases, and Professor of Medicine, City of Hope, one of the largest cancer research and treatment organizations in the United States, and posoleucel study investigator. “These new data continue to support the potential for posoleucel to prevent infections caused by these six viruses that can lead to significant morbidity and mortality in a vulnerable patient population with limited to no effective treatment options.”

“The clinical data presented at EBMT continue to demonstrate the transformative potential of posoleucel, a multi-virus-specific T-cell therapy, for immunocompromised patients,” said Diana Brainard, M.D., Chief Executive Officer, AlloVir. “We now have three ongoing Phase 3 studies of posoleucel in both the prevention and treatment of life-threatening viral infections with limited or no treatment options. We are working urgently on advancing our three global, registrational trials for posoleucel to bring this important therapy to children and adults who are at risk for or suffer from these devastating viral diseases.”

Preliminary Study Findings

This multi-center, open-label, randomized, double-blind, placebo-controlled, Phase 2 study is evaluating the efficacy and safety of posoleucel for the prevention of six potentially life-threatening viral infections – AdV, BKV, CMV, EBV, HHV-6 and JCV – in 26 high-risk allo-HCT patients. Patients receive up to seven biweekly posoleucel infusions and are tested for viremia by polymerase chain reaction (PCR) on a weekly basis against all six viruses over a period of 14 weeks. Following this dosing period, patient follow-up extends through Week 26.

At the time of the data cut-off for this preliminary analysis, all 26 patients received at least a single dose of posoleucel. Twenty-four patients have completed dosing through Week 14, and the evaluation of two patients for the primary endpoint is ongoing. Of the enrolled patients, 12 (46%) received cells from haploidentical donors, nine (35%) from mismatched unrelated donors, four (15%) from matched unrelated donors with T cell depletion or with lymphopenia, and one (4%) from umbilical cord blood.

In this preliminary analysis, high-risk allo-HCT patients receiving posoleucel had rates of clinically significant viral infections substantially lower than the approximately 70% expected in this population, as estimated through an analysis of peer-reviewed published data and electronic medical record reviews.

The primary study endpoint is the number of new-onset clinically significant infections or end-organ disease through Week 14. Among the 26 patients who received at least a single dose of posoleucel, only three of 156 possible clinically significant infections from these six common and life-threatening viruses were observed in three patients through 14 weeks. Specifically, two patients initiated preemptive CMV treatment with valganciclovir, and one

patient started rituximab for EBV in the setting of receiving high-dose steroids and progressed to post-transplant lymphoproliferative disease.

Repeat posoleucel dosing has been generally well-tolerated, with no unanticipated safety signals. The observed rates and severity of graft versus host disease were lower than those expected in this high-risk allo-HCT patient population. Three (12%) treatment-related serious adverse events were reported.

In addition to clinical data, initial biomarker data were also presented, demonstrating the expansion and persistence of posoleucel cells among patients with available data at the time of this analysis. Of the nine patients with available T cell receptor sequencing data, all had detectable posoleucel cells, with confirmed persistence for up to 14 weeks after the last infusion. A preliminary assessment of virus-specific T cell activity against the infecting virus by IFN-γ ELIspot demonstrated expansion following transient viremia.

About Posoleucel

AlloVir's lead product, posoleucel (Viralym-M, ALVR105), is in late-stage clinical development as an allogeneic, off-the-shelf, multi-virus specific T-cell therapy targeting six viral pathogens in immunocompromised individuals: adenovirus (AdV), BK virus (BKV), cytomegalovirus (CMV), Epstein-Barr virus (EBV), human herpesvirus-6 (HHV-6) and JC virus (JCV). In the positive Phase 2 proof-of-concept CHARMS study, more than 90% of patients who failed conventional treatment and received posoleucel demonstrated a complete or partial clinical response based on predefined criteria, most with complete elimination of detectable virus in the blood and resolution of major clinical symptoms. FDA has granted posoleucel Regenerative Medicine Advanced Therapy (RMAT) designation for the treatment of hemorrhagic cystitis (HC) caused by BKV and for the treatment of adenovirus (AdV) infection in adults and children following allo-HCT, and Orphan Drug Designation for the treatment of virus-associated HC. The European Medicines Agency has granted posoleucel PRIority Medicines (PRIME) designation for the treatment of serious infections with AdV, BKV, CMV, EBV and HHV-6, and Orphan Medicinal Product designation as a potential treatment of viral diseases and infections in patients undergoing HCT.

About AlloVir

AlloVir is a leading late clinical-stage cell therapy company with a focus on restoring natural immunity against life-threatening viral diseases in pediatric and adult patients with weakened immune systems. The company's innovative and proprietary technology platforms leverage off-the-shelf, allogeneic, single- and multi-virus-specific T cells for patients with T cell deficiencies who are at risk from the life-threatening consequences of viral diseases. AlloVir's technology and manufacturing process enable the potential for the treatment and prevention of a spectrum of devastating viruses with each single allogeneic cell therapy. The company is advancing multiple mid- and late-stage clinical trials across its product portfolio. For more information, visit www.allovir.com or follow us on Twitter or LinkedIn.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, statements regarding AlloVir's development and regulatory status of our product candidates, the planned conduct of its preclinical studies, and clinical trials and its prospects for success in those studies and trials, and its strategy, business plans and focus. The words "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "project," "potential," "continue," "target" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of 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, those related to AlloVir's financial results, the timing for the initiation and successful completion of AlloVir's clinical trials of its product candidates, whether and when, if at all, AlloVir's product candidates will receive approval from the U.S. Food and Drug Administration, or FDA, or other foreign regulatory authorities, competition from other biopharmaceutical companies, the impact of the COVID-19 pandemic on AlloVir's product development plans, supply chain, and business operations and other risks identified in AlloVir's SEC filings, including but not limited to the risks discussed in AlloVir's Annual Report on Form 10-K for the year ended December 31, 2021 and in our other filings with the SEC. AlloVir cautions you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. AlloVir 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. Any forward-looking statements contained in this press release represent AlloVir's views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date.

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