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Mustang Bio Announces MB-106 CD20-Targeted CAR T Data Selected for Presentation at European Hematology Association 2021 Virtual Congress

Fred Hutchinson Cancer Research Center to present updated interim data from ongoing MB-106 Phase 1/2 clinical trial

WORCESTER, Mass., May 12, 2021 (GLOBE NEWSWIRE) -- Mustang Bio, Inc. (“Mustang”) (NASDAQ: MBIO), a clinical-stage biopharmaceutical company focused on translating today’s medical breakthroughs in cell and gene therapies into potential cures for hematologic cancers, solid tumors and rare genetic diseases, today announced that interim data from the ongoing Phase 1/2 clinical trial investigating the safety and efficacy of MB-106 CD20-targeted CAR T for high-risk B-cell non-Hodgkin lymphomas (“B-NHL”) and chronic lymphocytic leukemia (“CLL”) has been selected for an e-poster presentation at the European Hematology Association 2021 Virtual Congress (“EHA2021”). MB-106 is being developed in a collaboration between Mustang and Fred Hutchinson Cancer Research Center (“Fred Hutch”).

In the abstract posted today on the EHA2021 website, Fred Hutch reported on 12 patients treated with MB-106, which underwent a major cell manufacturing modification after treating the first 7 patients as previously reported at the 62nd Annual American Society of Hematology meeting in 2020. The 12 patients treated under the new manufacturing process were treated at dose levels (“DL”) ranging from 3.3x10^{5} to 1x10^{7} CAR T cells/kg, and clinical responses were observed at all DLs with no dose-limiting toxicities. Cytokine release syndrome occurred in 3 patients (25%): 2 patients with grade 1 and 1 patient with grade 2. Only 1 patient required tocilizumab and dexamethasone, and no immune effector cell-associated neurotoxicity syndrome of any grade was observed. Overall response rate (“ORR”) was 92% (11/12) with a complete response (“CR”) rate of 58% (7/12). In 9 patients with follicular lymphoma, ORR and CR were 89% (8/9) and 67% (6/9), respectively. The patient with CLL had a PET-negative CR and undetectable measurable residual disease in peripheral blood and bone marrow by flow cytometry (10^{-4}) (uMRD4) on day 28. Among patients who received the highest two dose levels, DL3 (3.3x10^{6} CAR T cells/kg; n=4) and DL4 (1x10^{7} CAR T cells/kg; n=1), CR rate was 100% (5/5). All 7 patients who achieved a CR remain in remission at a median follow-up of 4 months. CAR T expansion was robust, with median peak blood levels of CAR+ T cells of 122 CAR+ cells/µl (range 0.27-2024),

corresponding to 19% (range 0.15 - 65%) of all CD3+ cells. Updated data will be presented at EHA2021.

Manuel Litchman, M.D., President and Chief Executive Officer of Mustang, said, “We are pleased that Fred Hutch will present interim data from the ongoing Phase 1/2 trial of MB-106 at EHA2021. The data thus far indicate that MB-106 has a highly favorable safety profile at all dose levels when compared to commercially available CAR T cell therapies targeting CD19. We look forward to the continued progression of this CD20-targeted CAR T cell therapy program for patients with relapsed or refractory B-cell non-Hodgkin lymphomas and CLL.”

Details of the MB-106 e-poster presentation are as follows:

Topic: 25. Gene therapy, cellular immunotherapy and vaccination – Clinical
Abstract Code: EP731
Title: Immunotherapy Using a 3rd Generation CD20 Targeted CAR T-Cell (MB-106) for Treatment of B-Cell Non-Hodgkin Lymphoma (B-NHL) and Chronic Lymphocytic Leukemia (CLL)
Presenter: Mazyar Shadman, M.D., M.P.H., Fred Hutchinson Cancer Research Center, Seattle, WA, USA
Date and Time: All e-posters will be available for viewing on June 11, 2021 at 09:00 Central European Summer Time (CEST) / 3 a.m. ET

A copy of the abstract can be viewed online through the EHA2021 website at https://ehaweb.org.

About Mustang Bio
Mustang Bio, Inc. (“Mustang”) is a clinical-stage biopharmaceutical company focused on translating today’s medical breakthroughs in cell and gene therapies into potential cures for hematologic cancers, solid tumors and rare genetic diseases. Mustang aims to acquire rights to these technologies by licensing or otherwise acquiring an ownership interest, to fund research and development, and to outlicense or bring the technologies to market. Mustang has partnered with top medical institutions to advance the development of CAR T therapies across multiple cancers, as well as a lentiviral gene therapy for XSCID. Mustang is registered under the Securities Exchange Act of 1934, as amended, and files periodic reports with the U.S. Securities and Exchange Commission (“SEC”). Mustang was founded by Fortress Biotech, Inc. (NASDAQ: FBIO). For more information, visit www.mustangbio.com.

Forward-Looking Statements
This press release may contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, each as amended. Such statements include, but are not limited to, any statements relating to our growth strategy and product development programs and any other statements that are not historical facts. Forward-looking statements are based on management’s current expectations and are subject to risks and uncertainties that could negatively affect our business, operating results, financial condition and stock value. Factors that could cause actual results to differ materially from those currently anticipated include: risks relating to our growth strategy; our ability to obtain, perform under, and maintain financing and strategic agreements and relationships; risks relating to the results of research and development

activities; risks relating to the timing of starting and completing clinical trials; uncertainties relating to preclinical and clinical testing; our dependence on third-party suppliers; our ability to attract, integrate and retain key personnel; the early stage of products under development; our need for substantial additional funds; government regulation; patent and intellectual property matters; competition; as well as other risks described in our SEC filings. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations or any changes in events, conditions or circumstances on which any such statement is based, except as required by law, and we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

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