May 12, 2020

Mustang Bio Announces Presentations at 23rd Annual Meeting of the American Society of Gene & Cell Therapy

WORCESTER, Mass., May 12, 2020 (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 two poster presentations at the virtual 23rd Annual Meeting of the American Society of Gene & Cell Therapy (“ASGCT”), being held May 12-15, 2020.

Manuel Litchman, M.D., President and Chief Executive Officer of Mustang, said, “We are extremely pleased with the strides forward that our researchers have made in gaining greater insights into our innovative CS1 chimeric antigen receptor (CAR) T cell therapy (MB-104), which we previously licensed from City of Hope. We commend them on their poster presentations at ASGCT and look forward to learning more as they continue their research to optimize our clinical trials.”

Details on the poster presentations are as follows:

Title: CS1 Targeted CAR-T Cells (MB-104) for the Treatment of Multiple Myeloma Shows Antitumor Activity Sparing Normal T-Cells Despite the Common Expression of CS1
Session: Cell Therapies
Abstract number: 421
Date and Time: Tuesday, May 12, 2020, 5:30 PM-6:30 PM ET
Room: Exhibit Hall C & D
Authors: Nathan Gumlaw, Aviva Joseph, James Edinger, Ekta Patel, Research and Translational Sciences, Mustang Bio, Worcester, MA

This poster describes researchers’ investigation into the impact of MB-104 on CS1 positive and negative cells *in vitro,* as well as T cells due to shared CS1 antigen expansion. The researchers demonstrated MB-104 does not confer biologically significant fratricide and can be successfully manufactured as evident by viability, growth kinetics and fold expansion, despite the shared antigen expression between tumor cells and T cells. CS1 positive T cells are present in culture during the expansion of MB-104, suggesting absence of fratricide. Finally, MB-104 can induce potent anti-tumor cell lysis and proliferates in response to tumor cells but not primary T cells expressing CS1. Taken together, their results demonstrate MB-104 is a novel CS1-targeting CAR T that shows potent anti-tumor cell lysis but spares

normal T cells, despite the shared CS1 antigen expression.

Title: Development of an Immunohistochemistry Assay for the Detection of CS-1 Expression in Multiple Myeloma Patients
Session: Pharmacology/Toxicology Studies or Assay Development
Abstract number: 897
Date and Time: Wednesday, May 13, 2020, 5:30 PM-6:30 PM ET
Room: Exhibit Hall C & D
Authors: Bethany Biron Girard, James Edinger, Ekta Patel, Translational Sciences, Mustang Bio, Worcester, MA

This poster details a study in which researchers evaluated commercially available CS1 antibodies for IHC and identified the best clone with high specificity for CS1 to improve screening subjects for CS1 positive tumor expression prior to treatment and correlate efficacy with antigen expression. The researchers, for the first time, developed and optimized a robust immunohistochemistry assay for the assessment of CS1 expression in bone marrow core biopsy samples and plasmacytoma solid tumor samples from multiple myeloma ("MM") patients, which can be used for enrollment into Mustang's CS1 CAR T clinical trials.

For more information, including abstracts, please visit the ASGCT meeting website at https://annualmeeting.asgct.org/am20/.

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.

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