

Mustang Bio Announces Phase 1 Clinical Trial Evaluating MB-105 for Prostate Stem Cell Antigen-Positive Castration-Resistant Prostate Cancer Enrolling Patients at City of Hope

New York, NY – September 23, 2019 – 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 City of Hope, a world-renowned independent cancer research and treatment center, has opened and is beginning to treat its first patients in a Phase 1 clinical trial of MB-105, a prostate stem cell antigen (PSCA) chimeric antigen receptor (CAR) T technology, for the treatment of prostate cancer. MB-105 was developed in the laboratory of Saul Priceman, Ph.D., assistant professor in City of Hope's Department of Hematology & Hematopoietic Cell Transplantation and a scientist in the T Cell Therapeutics Research Laboratory led by Stephen Forman, M.D., leader of City of Hope's Hematologic Malignancies and Stem Cell Transplantation Institute and the Francis & Kathleen McNamara Distinguished Chair in Hematology and Hematopoietic Cell Transplantation.

The clinical trial is one of the first CAR T trials for prostate cancer in the nation and can enroll up to 33 patients. Its primary endpoints are to define the side effects and best dose of PSCA CAR T cells in treating patients with PSCA-positive castration-resistant prostate cancer (CRPC) that has metastasized to other areas in the body. Secondary endpoints include assessing the expansion and persistence of PSCA CAR T cells, the clinical response based on Prostate Cancer Working Group 3 (PCWG3) criteria, survival outcomes and serum cytokine profiles in peripheral blood pre- and post-therapy, as well as describing the PSCA expression level on tumor cells prior to CAR T cell infusion and the relationship it may have with disease response and toxicities.

The Prostate Cancer Foundation provided support for the preclinical research efforts that led to the trial's development, as well as support for the clinical trial. Research is also supported by a generous gift from Barbara and Zach Horowitz and Gary Marsh and Jody Horowitz Marsh.

"Patients with advanced prostate cancer are in urgent need of a therapy that could provide a more durable remission," said Tanya Dorff, M.D., City of Hope associate clinical professor in the Department of Medical Oncology & Therapeutics Research, head of the genitourinary cancers program and the trial's principal investigator. "CAR T cell therapy has cured some cancers that are difficult to treat, and we want to know if we can do that for prostate cancer. Our hope is that this CAR T cell therapy can be a game changer for these patients."

According to the American Cancer Society, prostate cancer is the most common cancer in American men, excluding skin cancer. In 2019, there were about 174,650 new cases of prostate cancer in the U.S., and roughly one out of every nine men will be diagnosed with prostate cancer during his lifetime. The median survival for men with CRPC is less than two years, according to the American Urological Association.

Manuel Litchman, M.D., President and Chief Executive Officer of Mustang, said, "MB-105 is an innovative CAR T technology designed to address a variety of hard-to-treat solid tumor cancers, including prostate, pancreatic, gastric and bladder cancers. The dosing of the first patients in this Phase 1 clinical trial evaluating MB-105 in PSCA-positive castration-resistant prostate cancer is a pivotal step toward better understanding its potential to help a wide range of patients with limited treatment options."

For more information on this Phase 1 trial, please visit www.clinicaltrials.gov using identifier NCT03873805.

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 and CRISPR/Cas9-enhanced 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. 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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