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# Mustang Bio Reports Preclinical Data on Regional Delivery of MB-103 HER2 Chimeric Antigen Receptor Engineered T (CAR T) Cells to Target HER2+ Breast Cancer Metastasis to the Brain

## Data support clinical development of MB-103 HER2 CAR T cell therapy

NEW YORK, Oct. 31, 2017 (GLOBE NEWSWIRE) -- Mustang Bio, Inc. ("Mustang") (NASDAQ:MBIO), a Fortress Biotech (NASDAQ:FBIO) Company focused on the development of novel immunotherapies based on proprietary chimeric antigen receptor engineered T cell (CAR T) technology, announced that preclinical data for MB-103, its second-generation HER2 CAR T cell therapy, were published online in [Clinical Cancer Research](#), a journal of the American Association for Cancer Research. These data demonstrate effective targeting of breast cancer brain metastases with intraventricular delivery of HER2-BBζ CAR T cells, and support the clinical development of this therapy. Mustang's research partner, City of Hope ("COH"), conducted the preclinical study.

Manuel Litchman, M.D., President and Chief Executive Officer of Mustang, said, "These encouraging preclinical data demonstrate the potential of our HER2 CAR T cell therapy to be an effective new treatment option for patients suffering from HER2+ breast cancer that has metastasized to the brain. This study shows the significance of CAR design in defining an optimized CAR T cell, and highlights intraventricular delivery of HER2 CAR T cells for treating multifocal brain metastases and leptomeningeal disease. Our team looks forward to the clinical advancement of this CAR T cell therapy in collaboration with our research partners at City of Hope, including a first-in-human Phase 1 study of MB-103 planned to initiate in 2018."

### Key Conclusions:

- Humanized HER2 CAR T cells containing a 4-1BB intracellular co-stimulatory domain show reduced cytokine production with similar cytolytic activity compared with CD28
- 4-1BB-containing HER2 CARs demonstrate improved tumor killing, with reduced T cell exhaustion and greater proliferative capacity compared to CD28-containing HER2 CARs
- Regression of breast cancer brain metastasis following local delivery of HER2 CAR T

cells

- Regional intraventricular delivery of HER2-BBζ CAR T cells eradicates breast cancer brain metastasis
- Regression of multifocal CNS disease following intraventricular HER2-BBζ CAR T cell delivery

### **About Mustang Bio**

Mustang Bio, Inc., a subsidiary of Fortress Biotech, Inc., is a clinical-stage biopharmaceutical company focused on the development and commercialization of novel cancer immunotherapy products designed to leverage the patient's own immune system to eliminate cancer cells. Mustang aims to acquire rights to these technologies by licensing or otherwise acquiring an ownership interest, funding research and development, and outlicensing or bringing the technologies to market. Mustang has partnered with the City of Hope National Medical Center ("COH") and the Fred Hutchinson Cancer Research Center in the development of proprietary chimeric antigen receptor (CAR) engineered T cell (CAR T) therapies across many cancers. Mustang's lead programs are in Phase 1 clinical trials at COH: MB-101 for the treatment of brain cancer and MB-102 as a therapeutic agent in acute myeloid leukemia. Mustang is registered under the Securities Exchange Act of 1934, as amended, and files periodic reports with the U.S. Securities and Exchange Commission. For more information, visit [www.mustangbio.com](http://www.mustangbio.com).

### **About Fortress Biotech**

Fortress Biotech, Inc. ("Fortress") is a biopharmaceutical company dedicated to acquiring, developing and commercializing novel pharmaceutical and biotechnology products. Fortress develops and commercializes products both within Fortress and through certain of its subsidiary companies, also known as Fortress Companies. In addition to its internal development programs, Fortress leverages its biopharmaceutical business expertise and drug development capabilities and provides funding and management services to help the Fortress Companies achieve their goals. Fortress and the Fortress Companies may seek licensing arrangements, acquisitions, partnerships, joint ventures and/or public and private financings to accelerate and provide additional funding to support their research and development programs. For more information, visit [www.fortressbiotech.com](http://www.fortressbiotech.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; risks relating to the results of research and development activities; risks relating to the timing of starting and completing clinical trials; our ability to obtain, perform under and maintain financing and strategic agreements and relationships; 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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