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MAIA Biotechnology Presents Preclinical Data at SITC Annual Meeting Validating Efficacy of THIO in Treating Hepatocellular Carcinoma

Novel anticancer agent may enhance overall therapeutic efficacy of current immune checkpoint inhibitor-based treatments

CHICAGO--(BUSINESS WIRE)-- MAIA Biotechnology, Inc. (NYSE American: MAIA) ("MAIA," "the Company"), a clinical-stage biopharmaceutical company developing targeted immunotherapies for cancer, today announced the results of a pre-clinical study of the Company's lead drug candidate, THIO, in hepatocellular carcinoma (HCC) in vitro and in vivo models. MAIA presented the data at the Society for Immunotherapy of Cancer's (SITC) 37th Annual Meeting, held Nov. 8-12 virtually and in Boston.

The results indicate that THIO, a first-in-class telomere-targeted agent may enhance the overall therapeutic efficacy of current immune checkpoint inhibitor-based treatments for HCC. In April, MAIA received an Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) for THIO for the treatment of HCC.

Before the study, the researchers hypothesized that telomere-targeting agents may be effective in HCC. The study evaluated the activity of THIO and second-generation analogues in vitro using telomerase-positive HCC cells and in vivo using syngeneic mouse models of aggressive HCC.

The study found that THIO treatment:

- Directly killed cancer cells, as it induced replicative stress, followed by cell cycle arrest and apoptosis in telomerase-reactivated HCC cells.
- Stimulated anti-tumor immune response, as it activated pathways associated with innate and adaptive immunity and altered the immune-suppressive tumor microenvironment in syngeneic mouse models of aggressive HCC.
- Enhanced the response to immune therapy checkpoint inhibitors, yielding complete responses in some HCC model systems with no dose-limiting toxicities.

"In addition to observing complete responses with no recurrence after THIO treatment, we identified immune memory, meaning that the body was able to autonomously target cancer cells when challenged with an influx of even more cancer cells," said MAIA Chairman and Chief Executive Officer Vlad Vitoc, M.D. "We are thrilled with this latest set of data as all models treated with THIO exhibited curative properties. The projected growth of liver cancer cases illustrates an increasing unmet global medical need for effective HCC therapies and

this latest data reaffirms our belief in THIO's potential to address it. We also strongly believe that the U.S. FDA's Orphan Drug Designation of THIO for HCC further validates the quality of our data, and we look forward to continuing its clinical development."

About the SITC 37th Annual Meeting

The SITC 37th Annual Meeting provides a multidisciplinary educational and interactive environment focused on improving the outcome for current and future patients with cancer by incorporating strategies based on basic and applied cancer immunotherapy. The Annual Meeting consists of cutting-edge research presentations by experts in the field, oral and poster abstract presentations and ample opportunity for structured and informal discussions, including important networking opportunities. In addition, the meeting includes updates on major national and international initiatives coming from academia, government and industry, as well as important society projects. Additional meeting information is available on SITC's website.

About THIO

THIO (6-thio-dG or 6-thio-2'-deoxyguanosine) is a telomere-targeting agent currently in clinical development to evaluate its activity in non-small cell lung cancer (NSCLC), in sequential administration with cemiplimab (Libtayo®), a PD-1 inhibitor developed by Regeneron. Telomeres play a fundamental role in the survival of cancer cells and their resistance to current therapies. THIO is being developed as a second or higher line of treatment for NSCLC for patients that have progressed beyond the standard-of-care regimen of existing checkpoint inhibitors.

About MAIA Biotechnology, Inc.

MAIA is a clinical-stage biopharmaceutical company developing targeted immunotherapies for cancer. The Company's lead program is THIO, a potential first-in-class cancer telomere targeting agent in clinical development for the treatment of patients with telomerase-positive cancers. For more information, please visit www.maiabiotech.com.

Forward Looking Statements

This press release includes forward-looking statements including, but not limited to, statements related to the closing of the offering and the expected use of proceeds, development of drug candidates, our operations and business strategy, our expected financial results, and corporate updates. The forward-looking statements contained in this press release are based on management's current expectations and are subject to substantial risks, uncertainty and changes in circumstances. Actual results may differ materially from those expressed by these expectations due to risks and uncertainties, including, among others, those related to our ability to obtain additional capital on favorable terms to us, or at all, including, without limitation, to fund our current and future preclinical studies and clinical trials and the success, timing and cost of our drug development program and our ongoing or future preclinical studies and clinical trials, including, without limitation, the possibility of unfavorable new clinical and preclinical data and additional analyses of existing data, that the risks that prior clinical and preclinical results may not be replicated, and risks associated with the current coronavirus pandemic. Forward-looking statements speak only as of the date of this press release, and we undertake no obligation to review or

update any forward-looking statement except as may be required by applicable law.

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