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MAIA Biotechnology Announces Peer-Reviewed Journal Publication of Data Validating Second Generation Ateganosine Prodrugs for Anticancer Therapy

Manuscript featured in leading open-access peer-reviewed scientific journal Nucleic Acids Research

CHICAGO--(BUSINESS WIRE)-- MAIA Biotechnology, Inc. (NYSE American: MAIA) ("MAIA", the "Company"), a clinical-stage biopharmaceutical company focused on developing targeted immunotherapies for cancer, today announced the publication of preclinical data from its second generation ateganosine prodrugs platform in Nucleic Acids Research (NAR), a leading open-access peer-reviewed scientific journal. The study, titled "Novel Telomere-Targeting Dual-Pharmacophore Dinucleotide Prodrugs for Anticancer Therapy," details MAIA's lead ateganosine (THIO)-derived second-generation prodrugs as promising new molecules in its strategy for enhancing cancer treatment and overcoming drug resistance. The manuscript with the data was published on June 26, 2025, in Volume 53, Issue 12 of the NAR journal.

In January 2023, MAIA nominated one lead new molecular entity candidate (designated as MAIA-2021-20) and one back-up new molecular entity candidate (MAIA-2022-12) for further advancement into preclinical GLP-toxicity and other studies. More than 80 ateganosine-like compounds have been developed as part of MAIA's second-generation telomere targeting program.

In the featured study, MAIA designed and synthesized divalent dinucleotide prodrugs comprised of two nucleosides. The lead THIO-containing compounds, with two THIO pharmacophores, demonstrated the strongest anticancer efficacy *in vivo* and induced the strongest host immune-memory responses *in vivo*.

"The reported study data has shown that the sequential combination of MAIA-2022-12 or MAIA-2021-20 with an immune checkpoint inhibitor demonstrated a significantly lower 50% inhibitory concentration with superior anticancer efficacy compared with the corresponding monotherapies. The results suggest that MAIA-2022-12 and MAIA-2021-20 are promising candidates for future preclinical and clinical studies," said MAIA Chairman and CEO Vlad Vitoc, M.D. "We are working now to advance at least one of the candidates into human clinical trials upon completion of required GLP-toxicity and other evaluations."

About Ateganosine

Ateganosine (THIO, 6-thio-dG or 6-thio-2'-deoxyguanosine) is a first-in-class investigational

telomere-targeting agent currently in clinical development to evaluate its activity in non-small cell lung cancer (NSCLC). Telomeres, along with the enzyme telomerase, play a fundamental role in the survival of cancer cells and their resistance to current therapies. The modified nucleotide 6-thio-2'-deoxyguanosine induces telomerase-dependent telomeric DNA modification, DNA damage responses, and selective cancer cell death. Ateganosine-damaged telomeric fragments accumulate in cytosolic micronuclei and activates both innate (cGAS/STING) and adaptive (T-cell) immune responses. The sequential treatment of ateganosine followed by PD-(L)1 inhibitors resulted in profound and persistent tumor regression in advanced, in vivo cancer models by induction of cancer type–specific immune memory. Ateganosine is presently developed as a second or later 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 targeted therapy, immuno-oncology company focused on the development and commercialization of potential first-in-class drugs with novel mechanisms of action that are intended to meaningfully improve and extend the lives of people with cancer. Our lead program is ateganosine (THIO), a potential first-in-class cancer telomere targeting agent in clinical development for the treatment of NSCLC patients with telomerase-positive cancer cells. For more information, please visit www.maiabiotech.com.

Forward Looking Statements

MAIA cautions that all statements, other than statements of historical facts contained in this press release, are forward-looking statements. Forward-looking statements are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels or activity, performance or achievements to be materially different from those anticipated by such statements. The use of words such as "may," "might," "will," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "project," "intend," "future," "potential," or "continue," and other similar expressions are intended to identify forward looking statements. However, the absence of these words does not mean that statements are not forward-looking. For example, all statements we make regarding (i) the initiation, timing, cost, progress and results of our preclinical and clinical studies and our research and development programs, (ii) our ability to advance product candidates into, and successfully complete, clinical studies, (iii) the timing or likelihood of regulatory filings and approvals, (iv) our ability to develop, manufacture and commercialize our product candidates and to improve the manufacturing process, (v) the rate and degree of market acceptance of our product candidates, (vi) the size and growth potential of the markets for our product candidates and our ability to serve those markets, and (vii) our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates, are forward looking. All forward-looking statements are based on current estimates, assumptions and expectations by our management that, although we believe to be reasonable, are inherently uncertain. Any forward-looking statement expressing an expectation or belief as to future events is expressed in good faith and believed to be reasonable at the time such forward-looking statement is made. However, these statements are not guarantees of future events and are subject to risks and uncertainties and other factors beyond our control that may cause actual results to differ materially from those expressed in any forward-looking statement. Any forward-looking statement speaks only as of the date on which it was made.

We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by law. In this release, unless the context requires otherwise, “MAIA,” “Company,” “we,” “our,” and “us” refers to MAIA Biotechnology, Inc. and its subsidiaries.

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