

March 20, 2025



MAIA Biotechnology Announces Publication of Peer-Reviewed Study Featuring Potency and Potential of Novel THIO Prodrug

- Novel THIO dimer shows promise as a new compound with a dual mechanism of action for enhancing standard cancer treatments and overcoming resistance

CHICAGO--(BUSINESS WIRE)-- **MAIA Biotechnology, Inc., (NYSE American: MAIA)** ("MAIA", the "Company"), a clinical-stage biopharmaceutical company developing targeted immunotherapies for cancer, today announces the publication of preclinical data for its lead proprietary telomere-targeting THIO dimer in the peer-reviewed scientific journal [*Naunyn-Schmiedeberg's Archives of Pharmacology*](#).

In a preclinical study, THIO and its new described dimer form were found to be potent inhibitors of Glutathione S-transferase Pi (GSTP1), a key enzyme implicated in cancer progression and chemoresistance and a highly important factor for the detoxification of cancer cells. The findings suggest that the dimerized form of THIO could enhance chemotherapeutic efficacy by effectively targeting GSTP1 and reducing drug resistance. The article, titled "Investigation of the inhibitory effects of the telomere-targeted compounds on glutathione S-transferase P1," was [published](#) on February 15, 2025.

"The esteemed *Archives of Pharmacology* has published our first peer-reviewed paper about the unique potential of the lead molecule in our second-generation THIO program," said Vlad Vitoc, M.D., CEO of MAIA. "Preclinical findings illuminate the superior GSTP1 binding affinity and inhibitory potency of this novel prodrug and support continued development of this new strategy for cancer therapy."

MAIA's second generation research and discovery platform seeks to identify new telomere-targeting THIO-like compounds with potentially improved specificity towards cancer cells relative to normal cells and with potentially increased anticancer activity. More than 80 THIO-like compounds have been developed as part of the second-generation telomere targeting program.

"Our manuscript highlights the potential of THIO's dimer as a potent GSTP1 inhibitor and a promising new strategy for enhancing cancer treatment and overcoming drug resistance," said Chief Scientific Officer Sergei Gryaznov, Ph.D. "Further exploration of the combinatorial effects of THIO with standard chemotherapeutic agents could provide valuable insights for optimizing standard cancer treatment protocols. These efforts could pave the way for novel, targeted strategies in cancer therapy, offering new hope in the fight against drug-resistant cancers."

About *Naunyn–Schmiedeberg’s Archives of Pharmacology*

Naunyn–Schmiedeberg’s Archives of Pharmacology, founded in 1873, is the oldest existing pharmacological journal and a dedicated platform for new and significant information on drug action and toxicity of chemical compounds. The peer-reviewed scientific journal covers all fields of experimental and clinical pharmacology as well as toxicology and includes studies in neuropharmacology and cardiovascular pharmacology and those describing drug actions at the cellular, biochemical and molecular levels.

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 with 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, 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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Source: MAIA Biotechnology, Inc.