



Morphic Presents New Biomarker Data at DDW 2023 Supporting MORF-057 Program in Ulcerative Colitis

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-Data demonstrate increases in circulating plasmablasts, consistent with the increased antibody activity expected with anti-inflammatory mechanism of A4B7 inhibition-

WALTHAM, Mass., May 11, 2023 (GLOBE NEWSWIRE) -- Morphic Therapeutic (NASDAQ: MORF) today announced the presentation of new preclinical data in the MORF-057 IBD development program that are consistent with previous findings and add new support to mechanistic understanding of the molecule's activity in a nonhuman primate (NHP) model of ulcerative colitis. The poster presentation was made at Digestive Disease Week (DDW) 2023.

"The data presented at DDW continue to refine and reinforce our understanding of the pharmacokinetic-pharmacodynamic relationship of $\alpha 4\beta 7$ inhibition with respect to cellular biomarkers and MORF-057's translation to treatment of patients. Further, these results link Morphic's small molecule $\alpha 4\beta 7$ inhibitors with the pharmacology associated with approved anti-integrin IBD treatments," commented Bruce Rogers, PhD, President of Morphic.

The study presented at DDW examines longitudinal changes in circulating biomarkers in nonhuman primates (NHP) infused with stepwise increasing doses of MT-105, a small-molecule, selective $\alpha 4\beta 7$ integrin inhibitor tool compound with similar chemical properties to MORF-057.

Key findings from the NHP study included consistency of biomarker data when compared with previous MORF-057 results and with observations from the approved monoclonal antibody $\alpha 4\beta 7$ inhibitor. $\alpha 4\beta 7$ inhibition with MT-105 elicits similar changes, including $\alpha 4\beta 7$ receptor occupancy and lymphocyte subset changes, to those seen in humans receiving $\alpha 4\beta 7$ -targeted monoclonal antibodies or Morphic's small molecule inhibitor of $\alpha 4\beta 7$, MORF-057. The tool compound also demonstrates consistency of pharmacokinetic effect between individual animals with highly similar exposure response curves measuring the memory T cell biomarker. Notably, unbiased single cell RNA sequencing (scRNAseq) of pretreatment and MT-105-treated peripheral blood mononuclear cells reveals consistent increases in circulating plasma cells and plasmablasts correlated with increasing exposure of MT-105. These data suggest that $\alpha 4\beta 7$ inhibition with MT-105 impacts antibody secretion related to gut inflammation.

Poster Sa1761: *Predictive Translational Blood Biomarkers Dynamics of small molecule A4B7 inhibition in Nonhuman Primate*

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Poster: DDW poster Sa176 is available on the Investors tab of [Morphic's website](#).

About Morphic

Morphic Therapeutic is a biopharmaceutical company developing a portfolio of oral integrin therapies for the treatment of serious chronic diseases, including autoimmune, cardiovascular, and metabolic diseases, fibrosis, and cancer. Morphic is also advancing its pipeline and discovery activities in collaboration with Schrödinger using its proprietary MInT technology platform which leverages the Company's unique understanding of integrin structure and biology.

Forward Looking Statements

This press release contains "forward-looking" statements within the meaning of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, and of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to the MInT technology platform's ability to discover drug candidates and the ability of MORF-057 and $\alpha 4\beta 7$ inhibitors to treat IBD, including ulcerative colitis, or related indications. Statements including words such as "believe," "plan," "continue," "expect," "will be," "develop," "signal," "potential," "anticipate" or "ongoing" and statements in the future tense are forward-looking statements. These forward-looking statements involve risks and uncertainties, as well as assumptions, which, if they do not fully materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. Forward-looking statements are subject to risks and uncertainties that may cause Morphic's actual activities or results to differ significantly from those expressed in any forward-looking statement, including risks and uncertainties disclosed in this press release and other risks set forth in our filings with the Securities and Exchange Commission, including Morphic's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the SEC on February 23, 2023 and Quarterly Report on Form 10-Q for the quarter ended March 31, 2023 filed with the SEC on April 25, 2023. These forward-looking statements speak only as of the date hereof and Morphic specifically disclaims any obligation to update these forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

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