



GlycoMimetics, Inc.

Innovation Today, Healing Tomorrow.

GlycoMimetics' Uproleselan in Combination With Venetoclax/HMA Shown to Break Chemoresistance, Reduce Tumor Burden and Increase Survival in AML Model

December 5, 2020

GlycoMimetics exploring investigator-sponsored follow-up human studies

Oral presentation at 62nd ASH Annual Meeting and Exposition points to potential role for uproleselan as foundational therapy in acute myeloid leukemia (AML)

ROCKVILLE, Md.--(BUSINESS WIRE)--Dec. 5, 2020-- GlycoMimetics' (Nasdaq: GLYC) product candidate uproleselan — when added to a combination therapy of venetoclax and a hypomethylating agent (HMA) — was shown today in an oral presentation to break chemoresistance by dramatically and significantly reducing tumor burden as detected by circulating human AML cells after three weeks of treatment, and by significantly increasing survival ($p = 0.0009$) in an animal model engrafted with AML from a patient with acquired resistance to venetoclax/HMA combination therapy. The oral presentation made by Dr. Kyung Hee Chang, Department of Leukemia, Division of Cancer Medicine, The University of Texas MD Anderson Cancer Center, at the 62nd ASH Annual Meeting and Exposition supports the need for further clinical investigation to potentially extend the use of uproleselan, an investigational, first-in-class, targeted E-selectin antagonist, to other drug combinations and, in particular, to venetoclax/HMA.

"As in previously reported models, uproleselan has shown benefit when added to multiple chemotherapy regimens. These data, showing the potential benefit of adding uproleselan to a combination therapy of venetoclax and HMA, are important given the rapid changes in the landscape of approved AML therapies as well as those in development. The data strongly support conducting a clinical trial with this combination therapy," said Rachel King, GlycoMimetics' Chief Executive Officer.

"Given investigator interest in this data, we're actively exploring opportunities for investigator-sponsored clinical trials to study the implications in humans. If successful, these studies would further reinforce our goal of demonstrating the value of uproleselan across the spectrum of AML patients and with a variety of therapeutic combination regimens," she added.

GlycoMimetics previously presented preclinical data showing that hypomethylating agents up-regulate the expression of E-selectin ligand on AML cells. The Company believes E-selectin upregulation increases the binding affinity of the blasts to the vascular endothelium, where E-selectin is expressed, and as a result, contributes to increased chemoresistance. By antagonizing E-selectin's role in this cascade, GlycoMimetics believes uproleselan may be able to play a key role in deepening patient responses to or enhancing the duration of efficacy of venetoclax/HMA combinations.

Details on this presentation are as follows:

Title: Targeting E-selectin with GMI-1271 Overcomes Microenvironment-mediated Resistance to Venetoclax/HMA Therapy.

Presenters: Kyung Hee Chang, Muharrem Muftuoglu, Weiguo Zhang, Mahesh Basyal, Lauren Ostermann, William E. Fogler, John L. Magnani and Michael Andreeff.

Session: 604 Molecular Pharmacology and Drug Resistance in Myeloid Diseases.

Date and Time: Saturday, December 5, 2020. 5:00 - 8:30 p.m. ET

Presentation Time: 6:15 p.m. ET

About Uproleselan (GMI-1271)

Discovered and developed by GlycoMimetics, uproleselan is an investigational, first-in-class, targeted E-selectin antagonist. Uproleselan (yoo' pro le' sel an), currently in a comprehensive Phase 3 development program in AML, has received Breakthrough Therapy designation from the U.S. FDA for the treatment of adult AML patients with relapsed or refractory disease. Uproleselan is designed to block E-selectin (an adhesion molecule on cells in the bone marrow) from binding with blood cancer cells as a targeted approach to disrupting well-established mechanisms of leukemic cell resistance within the bone marrow microenvironment. In a Phase 1/2 clinical trial, uproleselan was evaluated in both newly diagnosed elderly and relapsed or refractory patients with AML. In both populations, patients treated with uproleselan together with standard chemotherapy achieved better-than-expected remission rates and overall survival compared to historical controls, which have been derived from results from third-party clinical trials evaluating standard chemotherapy, as well as lower-than-expected induction-related mortality rates. Treatment in these patient populations was generally well-tolerated, with fewer than expected adverse effects.

About GlycoMimetics, Inc.

GlycoMimetics is a biotechnology company with two late-stage clinical development programs and a pipeline of novel glycomimetic drugs, all designed to address unmet medical needs resulting from diseases in which carbohydrate biology plays a key role. GlycoMimetics' drug candidate, uproleselan, an E-selectin antagonist, was evaluated in a Phase 1/2 clinical trial as a potential treatment for AML and is being evaluated across a range of patient populations including a Company-sponsored Phase 3 trial in relapsed/refractory AML under Breakthrough Therapy designation. Rivipansel, a pan-selectin antagonist, is being explored for use in treatment of acute vaso-occlusive crisis in sickle cell disease. GlycoMimetics has also completed a Phase 1 clinical trial with another wholly-owned drug candidate, GMI-1359, a combined CXCR4 and E-selectin antagonist. GlycoMimetics is located in Rockville, MD in the BioHealth Capital Region. Learn more at www.glycomimetics.com.

Forward-Looking Statements

This press release contains forward-looking statements. These forward-looking statements include those relating to the planned or potential clinical

development of the Company's product candidates, including the presentation of data from preclinical studies and clinical trials and the potential benefits and impact of the Company's drug candidates. Actual results may differ materially from those described in these forward-looking statements. For a further description of the risks associated with these statements, as well as other risks facing GlycoMimetics, please see the risk factors described in the Company's annual report on Form 10-K filed with the U.S. Securities and Exchange Commission (SEC) on February 28, 2020, and other filings GlycoMimetics makes with the SEC from time to time. Forward-looking statements speak only as of the date of this release, and GlycoMimetics undertakes no obligation to update or revise these statements, except as may be required by law.

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