GlycoMimetics to Highlight GMI-1271 Clinical Data and Underlying, Differentiated Mechanism of Action in Oral Presentations at 59th Annual ASH Meeting

November 1, 2017

- *GMI-1271 improves efficacy and safety of chemotherapy in Phase 1/2 study in two acute myeloid leukemia (AML) patient populations*
- *Preclinical data detail underlying mechanism for GMI-1271's ability to enhance sensitivity to chemotherapy*
- *GlycoMimetics will review the GMI-1271 clinical data during a briefing for investors/analysts in Boston, December 19, at 7:30 a.m. ET*

ROCKVILLE, Md.--(BUSINESS WIRE)--Nov. 1, 2017-- GlycoMimetics, Inc. (NASDAQ: GLYC) today announced that data related to its lead clinical candidate, GMI-1271, will be highlighted in two oral presentations at the 59th American Society of Hematology (ASH) Annual Meeting and Expo. The ASH meeting will take place in Atlanta, GA, December 9-12, 2017.

The oral presentations at the ASH meeting will include results of a Phase 1/2 clinical study of GMI-1271, the company's E-selectin antagonist, and a preclinical study demonstrating one mechanism by which E-selectin mediates resistance to chemotherapy. The clinical data will show that the drug candidate improved clinical outcomes in relapsed/refractory as well as newly diagnosed AML patients. The preclinical data point to E-selectin dependent upregulation of tumor survival pathways, which are inhibited by GMI-1271.

"The data from our Phase 1/2 clinical trial continue to show a remission rate that is superior to historical controls as well as an excellent safety profile, most notably meaningful reductions in severe, grade 3/4 mucositis. Data in the published abstract reflect an update as of mid-summer, shortly after our interim report was last presented at the 2017 ASCO meeting. At the ASH meeting in December, we intend to present additional data from the study, including updated survival outcomes," noted Helen Thackray, M.D., FAAP, GlycoMimetics Senior Vice-President, Clinical Development and Chief Medical Officer.

Specifically, the abstract reports that among all relapsed/refractory AML patients treated at the recommended Phase 2 dose, the remission rate (CR/CRi) was 41% and overall response rate (ORR) was 50%. In the newly diagnosed AML population, the remission rate (CR/CRi) was 68% and ORR was 80%.

"These response rates are consistent with rates reported at the ASCO meeting," Dr. Thackray added. "Our Phase 2 population consists of very high-risk patients based on multiple criteria, including age, disease status, and cytogenetic risk factors. We are pleased to see that response rates in both populations remain higher than risk- and age-matched historical controls."

For both relapsed/refractory and newly diagnosed patients treated in the Phase 2 portion of the trial, the abstract reports that median overall survival and disease-free survival had not been reached. Updated duration of remission and survival data for both populations will be presented at the ASH meeting.

"Together, the clinical and preclinical data demonstrate that GMI-1271 could represent a novel and truly differentiated approach to treatment of AML," Dr. Thackray concluded.

Oral Presentation Details:

Abstract #894 —GMI-1271 Improves Efficacy and Safety of Chemotherapy in R/R and Newly Diagnosed Older Patients with AML: Results of a Phase 1/2 Study. Session 616. Monday, December 11, 7:30 p.m. ET, Bldg B/Level 5: Murphy BR 1-2.

Abstract #793 — Vascular E-Selectin Mediates Chemoresistance in Acute Myeloid Leukemia Initiating Cells Via Canonical Receptors PSGL-1 (CD162) and AKT Signaling. Session 604. Monday, December 11, 4:30 p.m. ET, Bldg B/Level 2: B207-208.

Meeting abstracts are available on ASH's website .

GlycoMimetics to Hold Post-ASH Meeting Briefing in Boston on December 19:

GlycoMimetics will hold a briefing for investors/analysts, which will also be available via webcast, to review the GMI-1271 program with a focus on the ASH meeting oral presentation of clinical data, in Boston, December 19, at 7:30 a.m. EST. Dr. Daniel J. DeAngelo, M.D., Ph.D., the GMI-1271 Phase 1/2 trial's Lead Investigator, who serves as Dana-Farber Cancer Institute Director of Clinical and Translational Research, Adult Leukemia, and Institute Physician, and Associate Professor of Medicine at Harvard Medical School, will present the data from the ASH oral presentation and respond to questions from on-site participants. Details on meeting location to follow.

About GMI-1271

GMI-1271 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 the Phase 1/2 clinical trial which has now completed enrollment, GMI-1271 is being evaluated in both elderly and relapsed/refractory patients with acute myeloid leukemia (AML). In both populations, patients treated with GMI-1271 together with standard chemotherapy have continued to achieve higher than expected

remission rates based on historical controls, as well as lower than expected induction-related mortality rates. Importantly, treatment in this patient population has been well tolerated with minimal adverse effects.

About GlycoMimetics, Inc.

GlycoMimetics is a clinical-stage biotechnology company focused on the discovery and development of novel glycomimetic drugs to address unmet medical needs resulting from diseases in which carbohydrate biology plays a key role. GlycoMimetics' most advanced drug candidate, rivipansel, a pan-selectin antagonist, is being developed for the treatment of vaso-occlusive crisis in sickle cell disease and is being evaluated in a Phase 3 clinical trial being conducted by its strategic collaborator, Pfizer. GlycoMimetics' wholly-owned drug candidate, GMI-1271, an E-selectin antagonist, is being evaluated in an ongoing Phase 1/2 clinical trial as a potential treatment for AML and in a Phase 1 clinical trial for the treatment of multiple myeloma. The U.S. Food and Drug Administration recently granted GMI-1271 Breakthrough Therapy designation for the treatment of adult AML patients with relapsed/refractory disease. GlycoMimetics has also recently initiated a Phase 1 clinical trial with a third 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.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements regarding the clinical development of GMI-1271, including the expected timing of completion of clinical trials and the presentation of clinical data. Actual results may differ materially from those 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 that was filed with the U.S. Securities and Exchange Commission (SEC) on March 1, 2017, 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.

View source version on businesswire.com: http://www.businesswire.com/news/home/20171101006029/en/

Source: GlycoMimetics, Inc.

GlycoMimetics, Inc.
Investor Contact:
Shari Annes, 650-888-0902
sannes@annesassociates.com
or
Media Contact:
Jamie Lacey-Moreira, 410-299-3310
jamielacey@presscommpr.com