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GlycoMimetics Presents Updated Data from Ongoing Phase 1/2 Clinical Trial of GMI-1271 in Patients with Acute Myeloid Leukemia at ASCO 2017 Annual Meeting

- *Remission rates continue to be higher than historical controls and induction-related mortality continues to be lower than historical controls*
- *GMI-1271 continues to be well tolerated in combination with induction chemotherapy*
- *Only one case of severe (Grade 3/4) mucositis reported among 79 patients receiving high-intensity induction chemotherapy*
- *Relapsed/refractory patients with more blasts expressing the E-Selectin ligand were more likely to achieve complete response (p value=.004)*
- *Initial duration of response data is encouraging*

ROCKVILLE, Md.--(BUSINESS WIRE)-- GlycoMimetics, Inc. (NASDAQ:GLYC) today announced new and updated data from the Phase 2 portion of its ongoing Phase 1/2 clinical trial that showed high remission and low mortality rates of its drug candidate GMI-1271, an E-selectin antagonist being developed as a treatment for patients with acute myeloid leukemia (AML). Clinical investigators are presenting the data today from 79 patients in the trial via posters and discussion at the 2017 annual meeting of the American Society for Clinical Oncology (ASCO) in Chicago. In this trial, patients treated with GMI-1271 together with standard chemotherapy continue to achieve higher than expected remission rates based on historical controls, as well as lower than expected induction-related mortality rates. Treatment also continues to be well tolerated in this patient population.

"We are excited to share this promising new data for GMI-1271, which continue to support the potential for this new drug candidate to treat AML, a disease that has often eluded medical interventions thus far," said Rachel King, Chief Executive Officer of GlycoMimetics. "We are increasingly optimistic that GMI-1271 may help address unmet needs in this and other cancers."

Among the 54 relapsed/refractory AML patients participating in the trial for whom data is available:

- The overall response rate (complete remission/complete remission with incomplete marrow recovery, or CR/CRi) was 41 percent, which is higher than historical controls, and the 60-day induction related mortality rate was 7 percent, which is lower than historical controls.
- Oral mucositis, or inflammation with mouth ulcers that is a sign of adverse effects of chemotherapy, was seen at low rates and severity with only one Grade 3/4 event observed.
- The median overall survival time for Phase 1 trial patients was 7.6 months.
- Remissions were durable enough to allow 9 patients to receive stem cell transplants.
- For patients in the Phase 1 portion of the trial who responded with a remission, more than half survived for at least a year after treatment.

Among the 25 newly diagnosed elderly patients (age 60 and older) participating in the trial for whom data is available:

- The overall response (CR/CRi) rate was 68 percent, with 73 percent in patients with de novo AML and 64 percent in patients with secondary AML.
- The 60-day mortality rate was 8 percent.
- There were no cases of grade 3 or 4 mucositis.
- For the 9 evaluable patients achieving CR/CRi, disease-free survival was 100% at 6 months after treatment.

"These results are very encouraging, indicating that the E-selectin antagonist may enhance our ability to improve the complete remission rate and potentially to improve the tolerability of intensive chemotherapy for patients with acute myeloid leukemia," said Daniel J. DeAngelo, MD, PhD, the 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. "We look forward to continuing our clinical testing of GMI-1271 and further examining its potential for improving outcomes for patients with AML."

The ASCO Annual Meeting is taking place from June 2-5, 2017 at McCormick Place in Chicago. More detail and the meeting abstracts are available at ASCO's website.

Data from the Phase 1/2 trial were submitted to the U.S. Food and Drug Administration (FDA). In May 2017, the FDA granted GMI-1271 Breakthrough Therapy designation for treatment of adult patients with relapsed/refractory AML. In addition, GMI-1271 has been granted Orphan Drug designation and Fast Track status by the FDA and Orphan Drug designation by the European Commission.

About GlycoMimetics, Inc.

GlycoMimetics is a clinical-stage biotechnology company focused on cancer and sickle cell disease. 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 in multiple myeloma. The U.S. FDA recently granted GMI-1271 Breakthrough Therapy designation for treatment of adult AML patients with relapsed/refractory disease. GlycoMimetics has also recently initiated a 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.

Forward-Looking Statements

This press release contains forward-looking statements regarding GlycoMimetics' planned activities with respect to the clinical development of its drug candidate GMI-1271. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including the availability and timing of data from ongoing clinical trials, the uncertainties inherent in the completion of ongoing clinical trials and the initiation of future clinical trials, whether interim results from a clinical trial will be predictive of the final results of the trial or results of early clinical trials will be indicative of the results of future trials, expectations for regulatory approvals, availability of funding sufficient for GlycoMimetics' foreseeable and unforeseeable operating expenses and capital expenditure requirements, other matters that could affect the availability or commercial potential of GlycoMimetics' drug candidates and other factors discussed in the "Risk Factors" section of GlycoMimetics' Annual Report on Form 10-K that was filed with the U.S. Securities and Exchange Commission on March 1, 2017, and other filings GlycoMimetics makes with the Securities and Exchange Commission from time to time. In addition, the forward-looking statements included in this press release represent GlycoMimetics' views as of the date hereof. GlycoMimetics anticipates that subsequent events and developments may cause its views to change. However, while GlycoMimetics may elect to update these forward-looking statements at some point in the future, GlycoMimetics specifically disclaims any obligation to do so, except as may be required by law. These forward-looking statements should not be relied upon as representing GlycoMimetics' views as of any date subsequent to the date hereof.

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