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GlycoMimetics Doses First Patient in Phase 1 Clinical Trial of Drug Candidate GMI-1271 for Multiple Myeloma

Trial to test candidate for second blood cancer type among patients responding poorly to standard therapy

ROCKVILLE, Md.--(BUSINESS WIRE)-- GlycoMimetics, Inc. (NASDAQ: GLYC) today announced it has dosed its first patient in a Phase 1 clinical trial of its novel E-selectin antagonist, GMI-1271, combined with bortezomib-based chemotherapy, for multiple myeloma. The trial marks a second application for GMI-1271, which already is undergoing clinical study as a potential treatment for acute myeloid leukemia (AML).

The newly initiated multi-center, open-label dose escalation trial, which has begun in Ireland, will measure the efficacy, safety and pharmacokinetics of GMI-1271 in combination with chemotherapy among patients who have been diagnosed with multiple myeloma and have not responded well to standard chemotherapy. The company anticipates enrolling 24 participants in the trial.

"This new clinical trial provides an opportunity to evaluate GMI-1271's ability to treat hematological cancers beyond AML," said Dr. John Quinn, Consultant Haematologist, Beaumont Hospital, Dublin, Ireland. "Preclinical studies showed promise for E-selectin antagonists against other types of cancers, so this pilot study in multiple myeloma may determine if GMI-1271 may become part of a bortezomib rescue treatment for patients not responding to standard regimens." Beaumont Hospital is one of a number of Blood Cancer Network Ireland (BCNI) sites participating in this study.

In preclinical studies, mice with multiple myeloma that were treated with GMI-1271 and bortezomib showed improvement in survival compared to those treated with bortezomib alone. Furthermore, in mice with myeloma resistant to treatment with bortezomib, addition of GMI-1271 restored bortezomib sensitivity. In addition, blood samples from individuals with multiple myeloma showed increases in cell surface expression of E-selectin carbohydrate ligands when cancer had relapsed, indicating E-selectin as a promising target for reducing drug resistance in certain groups of patients who have the disease.

Multiple myeloma is a neoplastic proliferation of plasma cells derived from bone marrow. The cells ultimately infiltrate a number of organs and lead to bone marrow destruction and failure. It is the most common tumor in the bone and the second most-common blood cancer in the US and Europe. According to EU data from 2012, 39,000 new diagnoses were made for multiple myeloma, and 24,000 people died from the disease there. Most patients currently ultimately relapse from chemotherapy, and the disease is not considered curable using current approaches.

In the Phase 1 study, participants will include individuals who have been diagnosed with multiple myeloma and undergone bortezomib-based therapy with inadequate responses. The patients will receive one of four doses of GMI-1271 in combination with bortezomib, intravenously concurrently with bortezomib treatment. They will be followed after treatment to measure safety endpoints and efficacy.

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. Preclinical research points to the drug's potential role in moving cancerous cells out of the protective environment of the bone marrow where they hide and escape the effects of chemotherapy. In preclinical studies using animal models of AML, the results of which were presented at meetings of the American Society of Hematology (ASH), GMI-1271 was also associated with a reduction of chemotherapy-induced neutropenia and chemotherapy-induced mucositis.

About GlycoMimetics, Inc.

GlycoMimetics is a clinical-stage biotechnology company focused on sickle cell disease and cancer. 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. 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 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 February 29, 2016, 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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