GlycoMimetics to Present New Preclinical Data Highlighting Biomarkers and Potential Expanded Pipeline Opportunities at Virtual AACR Annual Meeting 2020

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ROCKVILLE, Md.--(BUSINESS WIRE)--May 15, 2020-- GlycoMimetics, Inc. (Nasdaq: GLYC) today announced that preclinical research on two of its drug candidates, uproleselan and GMI-1359, will be shared at the American Association for Cancer Research (AACR) Annual Meeting 2020, which will now be held virtually from June 22-24.

During the June session, GlycoMimetics will present preclinical data that further support the potential of the Company's compounds to be used in the treatment of acute myeloid leukemia (AML) as well as in the setting of stem cell transplantation. Additionally, new information will be presented on the ability of transcriptome profiling to identify those tumor types most likely to benefit from targeted E-selectin inhibition, a key mechanism of GlycoMimetics drug candidates, supporting their potential uses in a biomarker-driven approach.

Important findings from the preclinical research include:

- Co-targeting and inhibition of E-selectin/CXCR4/FLT3 with GMI-1359 in combination with sorafenib exerts protection of normal hematopoiesis (blood cell formation) and more efficiently reduces leukemic burden compared to sorafenib alone, resulting in extended overall survival, in a patient-derived FLT3 resistant AML model;

- Inhibition of E-selectin with uproleselan during pre-transplant conditioning results in increased survival of mice in a hematopoietic stem cell transplantation and reconstitution model; and,

- Further analysis of E-selectin glycosylation genes extends the prognostic importance of this unique gene signature in AML, highlighting the potential use of uproleselan in AML and other hematologic malignancies.

"We look forward to presenting data at this year's AACR meeting that will support our approach to targeting E-selectin with both uproleselan and GMI-1359 as part of potential treatment regimens for patients with AML and other diseases," said John Magnani, Ph.D., GlycoMimetics Senior Vice President and Chief Scientific Officer. "Furthermore, the new data around glycosylation gene signatures highlights a potential biomarker-driven approach in targeting E-selectin."

Of note, data will be presented demonstrating that lethality of the FLT-3 mutation is specifically dependent upon high levels of E-selectin ligand expressed on the surface of AML blasts. FLT-3 ITD AML patients are known to express higher levels of E-selectin on the vasculature endothelium. In the patient data to be reported at the AACR meeting, patients who had the FLT-3 ITD mutation, but presented low levels of E-selectin ligand on their AML cells, did not experience worse outcomes, whereas those who did have FLT-3 ITD with high levels of E-selectin ligand, experienced poor survival. This adds support to the key role of E-selectin ligand in contributing to poor outcomes in AML and to the potential of uproleselan to improve AML treatment.

Details on GlycoMimetics' presentations at the upcoming virtual AACR meeting include:

- **Abstract Control #7924/ Permanent Abstract #5867:**

"Transcriptome profiling of ST3GAL4 and FUT7 in multiple tumor types and prognostic value in adult acute myeloid leukemia"

Session Type: Poster Session

Session Category: Molecular and Cellular Biology / Genetics

Session Title: Functional Genomics and Other Topics

- **Abstract Control #3865/ Permanent Abstract #486**:

"Enhanced survival of lethally-irradiated mice with HSC reconstitution in combination with the E-selectin antagonist, GMI-1271 (uproleselan)"

Session Type: Poster Session

Session Category: Tumor Biology

Session Title: Stem Cells, Cancer Stem Cell Therapeutic Targeting, and Regenerative Medicine

- **Abstract #5038:**

"Combined Targeting of E-selectin/CXCR4 and FLT3 by GMI-1359 and Sorafenib Effectively Reduces Leukemia Cell Burden and Protects Normal Hematopoiesis in a Patient-derived AML Xenograft Model"

Session Type: Poster Session

Session Category: Tumor Biology

Session Title: Drug Targets in the Microenvironment

Meeting abstracts are available at AACR's website.

About Uproleselan

Discovered and developed by GlycoMimetics, uproleselan and GMI-1687 are investigational, first-in-class, targeted inhibitors of E-selectin. 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 GMI-1359

GMI-1359 is designed to simultaneously inhibit both E-selectin and CXCR4. E-selectin and CXCR4 are both adhesion molecules involved in tumor trafficking and metastatic spread. Preclinical studies indicate that targeting both E-selectin and CXCR4 with a single compound could improve efficacy in the treatment of cancers that involve the bone marrow such as AML and multiple myeloma or in solid tumors that metastasize to the bone, such as prostate cancer and breast cancer, as well as in osteosarcoma, a rare pediatric tumor. GMI-1359 has completed a Phase 1 clinical trial in healthy volunteers. The Duke University Phase 1b clinical study in breast cancer patients is designed to enable investigators to identify an effective dose of the drug candidate and to generate initial biomarker data around the drug's activity. GMI-1359 has received Orphan Drug Designation and Rare Pediatric Disease Designation from the FDA for the treatment of osteosarcoma, a rare cancer affecting about 900 adolescents a year in the United States.

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' 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. 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 regarding the clinical development and potential benefits and impact of the Company's drug candidates. These forward-looking statements include those relating to the planned clinical development of the Company's wholly-owned product candidates. 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 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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