FOR IMMEDIATE RELEASE

GlycoMimetics Initiates Phase 2 Clinical Trial of Lead Candidate GMI-1070 in Sickle Cell Patients

FDA Grants GMI-1070 Fast Track Designation for Treatment of Vaso-Occlusive Crisis of Sickle Cell Disease

GAITHERSBURG, Md. – June 24, 2010 -- GlycoMimetics, Inc., a clinical-stage biotechnology company developing a new class of glycobiology-based therapies for a broad range of indications, today announced the commencement of a Phase 2 clinical trial of GMI-1070 for treatment of vaso-occlusive crisis of sickle cell disease. The company also announced that GMI-1070 has received Fast Track designation from the U.S. Food and Drug Administration (FDA).

The Phase 2 trial is a randomized, double-blinded study of the efficacy, safety and pharmacokinetics of GMI-1070 in hospitalized sickle cell disease patients experiencing vaso-occlusive crisis. Vaso-occlusive crisis is a painful and life-threatening condition affecting individuals with sickle cell disease in which the flow of blood is blocked as sickle cells become stuck within a blood vessel. GMI-1070 is a pan-selectin inhibitor intended to treat vaso-occlusive crisis by blocking the inflammatory process underlying cell adhesion. The Phase 2 study is designed to evaluate the effects of GMI-1070 on the duration or intensity of vaso-occlusive episodes when it is administered following onset of the crisis. The study will be conducted simultaneously at multiple clinical sites in the US and Canada.

"GMI-1070 is a promising and versatile compound, with demonstrated activity in blocking leukocyte adhesion. We are encouraged by the initial data achieved in our Phase 1 and pilot clinical studies of GMI-1070, and we are pleased to advance our lead compound into Phase 2 development," said Helen Thackray, M.D., GlycoMimetics' Vice President of Drug Development. "Evaluating GMI-1070 in the treatment of sickle cell patients hospitalized with vaso-occlusive crisis represents a critical next step towards fulfilling an important medical need in this historically underserved patient population. The importance of advancing new treatments for sickle cell is underscored by the receipt of Fast Track designation and prior receipt of Orphan Product status for GMI-1070 from the FDA."

The Fast Track program of the FDA is designed to facilitate the development and expedite the review of new drugs that are intended to treat serious or life-threatening conditions and that demonstrate the potential to address unmet medical needs. Fast Track designated drugs ordinarily qualify for priority review, thereby expediting the FDA review process.
In prior Phase 1 clinical evaluation in healthy volunteers and a pilot study in sickle cell patients not undergoing vaso-occlusive crisis at the time of dosing, GMI-1070 demonstrated encouraging safety and pharmacokinetic data, consistent with GlycoMimetics' preclinical studies of the compound.

About GMI-1070
GlycoMimetics' lead compound, GMI-1070 is a rationally-designed glycomimetic inhibitor of E-, P- and L-selectins that interferes in a key early step in the inflammatory process leading to leukocyte adhesion and recruitment to inflamed tissue. GMI-1070 has shown activity in several models of diseases in which leukocyte adhesion and activation play a key role.

GlycoMimetics is initially developing GMI-1070 for the treatment of vaso-occlusive crisis of sickle cell disease. By inhibiting selectin interactions, GMI-1070 may be able to decrease the enhanced cell adhesion that results in vaso-occlusive crisis. In preclinical studies GMI-1070 restored blood flow to affected vessels of sickle cell animals experiencing vaso-occlusive crisis. GMI-1070 is also being evaluated in preclinical studies for the treatment of other orphan diseases where selectin-mediated cell adhesion and migration is known to play a key role in the disease process. Two Phase 1 trials of GMI-1070 were successfully completed in the first quarter of 2009, with no serious adverse events reported. In September, the company announced the initiation of a pilot study of GMI-1070 in sickle cell patients. GMI-1070 has received Orphan Drug Designation for the treatment of vaso-occlusive crisis from the U.S. Food and Drug Administration.

About Sickle Cell Disease and Vaso-Occlusive Crisis
Vaso-occlusive crisis is a painful and life-threatening condition in which the flow of blood is blocked as sickle cells become stuck within a blood vessel. Vaso-occlusive crisis is the main clinical feature of sickle cell disease, causing severe pain, often resulting in significant patient complications, and sometimes death. Currently, there are no mechanism-based therapies for treatment of vaso-occlusive crisis. Treatment consists primarily of supportive therapy in the form of hydration and pain control, typically requiring hospitalization for five to six days. There are more than 75,000 hospitalizations per year associated with vaso-occlusive crisis in the U.S.

About GlycoMimetics, Inc.
GlycoMimetics is a privately held biotechnology company that capitalizes on advances in the field of glycobiology. The company uses rational design of small molecule drugs that mimic the functions of bioactive carbohydrates to develop new drug candidates. The company's initial focus is on therapeutics to treat orphan conditions in which inflammation and cell adhesion may play a key role. For additional information, please visit the company's website: **http://www.glycomimetics.com**.