FOR IMMEDIATE RELEASE

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PHRIXUS PHARMACEUTICALS, INC. REPORTS POSITIVE PRECLINICAL RESULTS IN RESPIRATORY DISEASE IN DUCHENNE MUSCULAR DYSTROPHY AFTER SUBCUTANEOUS DELIVERY OF CARMESEAL™ AT VERY LOW DOSES

Results extend the utility of Carmeseal™ from cardiac disease to respiratory disease, the main cause of mortality in boys with DMD

ANN ARBOR, Mich. (July 19 2012) – Phrixus Pharmaceuticals, Inc., a specialty pharmaceutical company focused on innovative therapies for Duchenne muscular dystrophy (DMD) and heart failure, today announced that it has completed preclinical studies in *mdx* mice that demonstrate a beneficial effect of Carmeseal™ on the diaphragm, the skeletal muscle that supports respiration, after subcutaneous dosing as low as 3 mg/kg per day.

Phrixus evaluated the effect of Carmeseal in *mdx* mice, the most widely used animal model of DMD, in a number of dosing regimens ranging from daily to weekly dosing, and at doses ranging from 3 to 300 mg/kg per day, all administered subcutaneously. Mice were aged to seven months and then dosed for five months to allow for full development of the phenotype. The effect of Carmeseal was evaluated by whole body plethsymography (WBP), an established method to understand the impact of drugs on respiratory function. These studies indicate that Carmeseal has a maximal effect on tidal volume, an important measure of respiratory performance, at doses as low as 3 mg/kg dosed once-a-day. This dosing would translate into a daily dose for each patient of 105 mg based on a 35 kg pediatric patient compared to bolus intravenous dosing of up to 120 grams per patient in previous trials for sickle cell disease, a difference of three orders of magnitude.

"These results demonstrate the utility of Carmeseal in respiratory disease, the main cause of death in boys with DMD, and open a new, convenient route of administration for Carmeseal, similar to the subcutaneous administration of insulin, a route that has been found acceptable for millions of individuals in diabetes," said Thomas A. Collet, president and CEO. "The results confirm our previous findings in animal models of heart failure, in which we demonstrated significant efficacy at doses up to two orders of magnitude lower than previously published," adds Dr. Bruce Markham, Vice President of Research and Chief Scientific Officer.

This work was funded by the National Institutes of Health (NIH) under its SBIR program and will be submitted for publication in a peer-reviewed journal.

DMD is the most devastating of the muscular dystrophies. No drug is approved for its treatment. It is a genetic disease that affects about one out of every 3,500 boys. Approximately 20,000 boys and young men live with this disease in the United States. The hallmarks of DMD are skeletal muscle weakness, respiratory distress, and cardiomyopathy. It is a degenerative disease that leads to premature death.

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About Carmeseal™

Carmeseal, generically known as poloxamer 188 (P-188), has been shown to improve the efficiency of damaged hearts to pump blood and to improve the performance of damaged diaphragms. When Carmeseal, which acts as a molecular band-aid, is infused into the bloodstream, it encounters and binds to microscopic tears in the muscle. This prevents the pathological leak of calcium into the cells, which causes calcium overload and keeps the muscle from performing as required. Carmeseal, which has been shown to be effective in four animal models of DMD and heart failure, is expected to have its effect in patients with DMD irrespective of the genetic defect that causes the disease.

About Phrixus Pharmaceuticals, Inc.

Phrixus Pharmaceuticals is developing Carmeseal for DMD and for acute decompensated heart failure. For more information about Phrixus Pharmaceuticals, please visit www.phrixuspharmaceuticals.com.

Phrixus Pharmaceuticals, Inc. Forward-Looking Statement Disclaimer

This announcement may contain, in addition to historical information, certain forward-looking statements that involve risks and uncertainties. Such statements reflect management's current views and are based on certain assumptions. Actual results could differ materially from those currently anticipated as a result of a number of factors. The company is developing several products for potential future marketing. There can be no assurance that such development efforts will succeed, that such products will receive required regulatory clearance or that, even if such regulatory clearance were received, such products would ultimately achieve commercial success.

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