Amicus Therapeutics Presents Positive Preclinical Pompe Disease Gene Therapy Data at the American Society of Gene & Cell Therapy (ASGCT) 22nd Annual Meeting

April 30, 2019

Preclinical Studies Show Robust Uptake and Glycogen Reduction in Multiple Tissues, Including Brain and Spinal Cord

Initial Validation for Collaboration Combining Amicus-Engineered Transgenes with Penn's AAV Gene Therapy Technologies

Significant and Broad New Amicus Platform Technology with Potential to Engineer Lysosomal Proteins to Enhance Targeting

Ongoing Preclinical Studies to Confirm Clinical Candidate Selection in 2019

Conference Call Today at 8:30am

CRANBURY, N.J., April 30, 2019 (GLOBE NEWSWIRE) -- Amicus Therapeutics (Nasdaq: FOLD) today announced initial preclinical data from its investigational adeno-associated viral (AAV) gene therapy program for Pompe disease in mice. These data will be highlighted in a poster (Poster 82, Abstract 518) entitled "Development of a Novel Gene Therapy for Pompe Disease: Engineered Acid Alpha-Glucosidase Transgene for Improved Expression and Muscle Targeting," at the American Society of Gene & Cell Therapy (ASGCT) 22nd Annual Meeting in Washington, D.C. today at 5:00 p.m. ET.

Pompe disease is an inherited lysosomal storage disorder caused by deficiency of the enzyme acid alpha-glucosidase (GAA). Reduced or absent levels of GAA lead to accumulation of glycogen in cells, which results in the clinical manifestations of Pompe disease. Amicus, in collaboration with the Gene Therapy Program of the Perelman School of Medicine at the University of Pennsylvania (Penn), is developing a novel gene therapy for Pompe disease that combines the Amicus protein-engineering and glycobiology expertise with Penn's adeno associated virus (AAV) gene transfer technologies.

This initial preclinical study used a single high dose of AAV in GAA knockout mice with either natural unmodified hGAA ("natural hGAA") or an Amicus/Penn engineered hGAA transgene with a lysosomal-targeting cell receptor binding motif ("engineered hGAA"). The Amicus/ Penn engineered hGAA is designed for optimal expression, secretion, and targeting which enables efficient cross-correction in target tissues (via the binding motif).

Preclinical Poster Highlights for Amicus/Penn AAV Gene Therapy for Pompe Disease:

- The Amicus/Penn hGAA AAV gene therapy demonstrated more uniform cellular uptake and lysosomal targeting compared to natural hGAA AAV gene therapy.
- The engineered hGAA AAV gene therapy demonstrated robust glycogen reduction in all key tissues in Pompe disease that were assessed.
- In the central nervous system (CNS), the engineered hGAA AAV gene therapy showed robust glycogen reduction in neuronal cells, suggesting this may be an effective way to address neuronal aspects of Pompe disease. Natural hGAA AAV gene therapy did not show glycogen reduction in neuronal cells.
- Initial findings validate the Amicus/Penn collaboration, as well as the potential of this platform to design constructs that enhance protein targeting across multiple lysosomal disorders.
- Additional preclinical studies to evaluate this engineered hGAA with various doses and routes of AAV administration are underway.
- The Pompe AAV gene therapy program builds upon the protein engineering and manufacturing expertise used to successfully develop AT-GAA, the Company's late-stage enzyme replacement therapy (ERT)-chaperone treatment paradigm.

Hung Do, PhD, Chief Science Officer of Amicus Therapeutics, stated, "These very important preclinical results validate our capabilities to develop engineered GAA proteins that can efficiently cross-correct target cells and tissues via a gene replacement therapy for Pompe disease. This approach may be applicable to other lysosomal disorders as we continue to combine our Amicus protein engineering expertise, together with Penn's vector engineering expertise, to develop novel gene therapies."

John F. Crowley, Chairman and Chief Executive Officer of Amicus Therapeutics, added, "Developing a potential cure for Pompe has been a personal and professional goal for many years. These data are profound and it is extremely rewarding to see these preclinical results that show our Amicus engineered GAA is optimized for uptake into target tissues and gets to the right cellular compartments, especially in the central nervous system. These data also provide preliminary and compelling evidence that the Amicus technology to design constructs that enhance protein targeting may be a significant platform for multiple lysosomal disorders. As these data exceed our expectations, our preclinical studies are progressing well ahead of schedule and we now expect to select a clinical candidate in 2019 to move forward into IND-enabling studies. Our mission has always been to develop potential best in class medicines and that is precisely what we are doing with both our novel, late-stage treatment paradigm AT-GAA as well as this preclinical gene therapy program."

Amicus is currently developing AAV gene therapies in collaboration with the Gene Therapy Program of the Perelman School of Medicine at the University of Pennsylvania (Penn) for Pompe disease, Fabry disease, CDKL5 deficiency disorder (CDD) and one additional undisclosed rare

metabolic disease. The agreement between Amicus and Penn is a Research, Collaboration and License Agreement, providing funding to Penn to advance the preclinical research programs in the Wilson Lab and to license certain technologies invented under the funded Research Collaboration.

“Amicus has differentiated itself by focusing on proteins and protein engineering, with a specific track record in the lysosomal disorders, which I believe are critically important to developing AAV gene therapies that can safely and effectively address these diseases,” said James M. Wilson, MD PhD, Professor of Medicine and Pediatrics at the Perelman School of Medicine at Penn. “These initial preclinical results are a significant step in highlighting our collaboration to rapidly advance gene therapies into the clinic for patients with urgent unmet needs in a disease like Pompe. These results demonstrate that the Amicus gene therapy that we have jointly developed has the potential to address both the neuromuscular as well as the motor neuron aspects of Pompe disease.”

Conference Call and Webcast on April 30, 2019 at 8:30 a.m. ET
Amicus Therapeutics will host a conference call and audio webcast today, April 30, 2019 at 8:30 a.m. ET to discuss the preclinical data presented at ASGCT. Interested participants and investors may access the conference call by dialing 877-303-5859 (U.S./Canada) or 678-224-7784 (international), conference ID: 1866796.

A live audio webcast and accompanying slide deck can also be accessed via the Investors section of the Amicus Therapeutics corporate website at http://ir.amicusrx.com/, and will be archived for 30 days. Web participants are encouraged to register on the website 15 minutes prior to the start of the call. A replay of the call will be available for seven days beginning at 11:30 a.m. ET on April 30, 2019. Access numbers for this replay are 855-859-2056 (U.S./Canada) and 404-537-3406 (international); conference ID: 1866796.

About Pompe Disease
Pompe disease is an inherited lysosomal storage disorder caused by deficiency of the enzyme acid alpha-glucosidase (GAA). Reduced or absent levels of GAA leads to accumulation of glycogen in cells, which results in the clinical manifestations of Pompe disease. The disease can be debilitating, and is characterized by severe muscle weakness that worsens over time. Pompe disease ranges from a rapidly fatal infantile form with significant impacts to heart function to a more slowly progressive, late-onset form primarily affecting skeletal muscle. It is estimated that Pompe disease affects approximately 5,000 to 10,000 people worldwide.

About Amicus Therapeutics
Amicus Therapeutics (Nasdaq: FOLD) is a global, patient-dedicated biotechnology company focused on discovering, developing and delivering novel high-quality medicines for people living with rare metabolic diseases. With extraordinary patient focus, Amicus Therapeutics is committed to advancing and expanding a robust pipeline of cutting-edge, first- or best-in-class medicines for rare metabolic diseases. For more information please visit the company’s website at www.amicusrx.com, and follow us on Twitter and LinkedIn.

Forward-Looking Statements
This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements relating to initial preclinical data from its investigational adeno-associated viral (AAV) gene therapy program for Pompe disease in mice and the potential implications of these data for the future advancement and development of a gene therapy for Pompe disease and other lysosomal disorders and development of potential platform technologies. Words such as, but not limited to, “look forward to,” “believe,” “expect,” “anticipate,” “estimate,” “intend,” "confidence," "encouraged," “potential,” “plan,” “targets,” “likely,” “may,” “will,” “would,” “should” and “could,” and similar expressions or words identify forward-looking statements. The forward looking statements included in this press release are based on management's current expectations and belief's which are subject to a number of risks, uncertainties and factors, including that the preliminary data based on a small patient sample and reported before completion of the study will not be predictive of future results, that results of additional preliminary data or data from the completed study or any future study will not yield results that are consistent with the preliminary data presented, that the Company will be not able to demonstrate the safety and efficacy of AT-GAA, that later study results will not support further development, or even if such later results are favorable, that the Company will not be able to successfully complete the development of, obtain regulatory approval for, or successfully commercialize AT-GAA. In addition, all forward looking statements are subject to the other risks and uncertainties detailed in our Annual Report on Form 10-K for the year ended December 31, 2018. As a consequence, actual results may differ materially from those set forth in this press release. You are cautioned not to place undue reliance on these forward looking statements, which speak only of the date hereof. All forward looking statements are qualified in their entirety by this cautionary statement and we undertake no obligation to revise this press release to reflect events or circumstances after the date hereof.

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Source: Amicus Therapeutics, Inc.