



Investigator-Initiated Study Shows Switching to Afrezza® Improves Glucose Control with No Additional Hypoglycemia in T2DM

June 13, 2020

WESTLAKE VILLAGE, Calif., June 13, 2020 (GLOBE NEWSWIRE) -- **MannKind Corporation (Nasdaq: MNKD)** announced that data from a new clinical study of Afrezza® (insulin human) Inhalation Powder will be presented at the **American Diabetes Association's 80th Scientific Sessions** during the ePoster session (Poster 990) on Saturday, June 13, 2020.

The lead author, Mark Kipnes, MD (Diabetes and Glandular Disease Clinic, San Antonio, Texas) presented clinical data from an investigator-initiated observational "switch" study that evaluated quality of life and glucose control in patients with type 2 diabetes previously treated with injected mealtime insulin. Following conversion to Afrezza, patients were followed for 14 weeks, and glucose control (measured by both A1C and glucose time in range), rates of hypoglycemia and quality of life were assessed.

Study subjects experienced a **significant (0.8%) reduction in A1C levels** at the end of the 14-week treatment period after switching from their injected mealtime insulin to Afrezza. Subjects maintained 66-69% "time in range" (time with glucose values in the range of 70-180 mg/dL) and reduced the time spent with glucose <90 mg/dL. Afrezza therapy resulted in a significant improvement in diabetes quality of life scores.

"This study shows that Afrezza treatment—combined with the use of continuous glucose monitoring—can improve overall glucose control while maintaining time in range. Importantly, the study also demonstrates a reduction in blood glucose levels without additional hypoglycemia," stated Dr. Kipnes. "In addition, after switching to Afrezza, these individuals reported an improvement in quality of life measures. This study demonstrates that by rapidly adjusting Afrezza doses, improved clinical outcomes were possible, and patients reported less burden from their diabetes treatment."

MannKind provided financial support and study product for use in this study.

About Afrezza®

Available by prescription, Afrezza® (insulin human) Inhalation Powder is an ultra rapid-acting inhaled insulin indicated to improve glycemic control in adult patients with diabetes mellitus. Afrezza consists of a dry powder formulation of human insulin delivered from a small and portable inhaler. Administered at the beginning of a meal, Afrezza dissolves rapidly upon inhalation to the lung and passes quickly into the bloodstream (in less than one minute). This rapid absorption allows Afrezza to begin reducing blood sugar levels within minutes of administration. Afrezza is available in 4-unit, 8-unit and 12-unit single-dose cartridges of insulin powder that can be used, as prescribed by a health care professional, in combination with other diabetes medications to achieve target blood sugar levels. For Afrezza doses exceeding 12 units, patients may use a combination of existing cartridge strengths. For more information about Afrezza, please visit www.afrezza.com.

About MannKind Corporation

MannKind Corporation (NASDAQ: MNKD) focuses on the development and commercialization of inhaled therapeutic products for patients with diseases such as diabetes and pulmonary arterial hypertension. MannKind is currently commercializing Afrezza® (insulin human) Inhalation Powder, the Company's first FDA-approved product and the only inhaled ultra rapid-acting mealtime insulin in the United States, where it is available by prescription from pharmacies nationwide. MannKind is headquartered in Westlake Village, California, and has a state-of-the art manufacturing facility in Danbury, Connecticut. The Company also employs field sales and medical representatives across the U.S. For further information, visit www.mannkindcorp.com.

Forward-Looking Statements

This press release contains forward-looking statements that involve risks and uncertainties. Words such as "believes," "anticipates," "plans," "expects," "intends," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon MannKind's current expectations. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties detailed in MannKind's filings with the SEC. For a discussion of these and other factors, please refer to MannKind's annual report on Form 10-K for the year ended December 31, 2019 as well as MannKind's other filings with the SEC. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this press release. All forward-looking statements are qualified in their entirety by this cautionary statement, and MannKind undertakes no obligation to revise or update any forward-looking statements to reflect events or circumstances after the date of this press release.

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