Xeris Pharmaceuticals Announces Positive Results From the Outpatient Stage of a Phase 2 Study of Its Developmental Gvoke Ready-to-Use (RTU) Micro™ Glucagon in Adults at Risk of Hypoglycemia During and After Aerobic Exercise

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Results show a pre-treatment with a micro dose (150 µg) of Gvoke RTU Micro significantly prevented Exercise-Induced Hypoglycemia (EIH) during prolonged, moderate-to-high intensity aerobic exercise in a real-world setting with or without adjustment to insulin

Study achieved all primary objectives

A micro dose of Gvoke RTU Micro demonstrated an encouraging safety and tolerability profile

CHICAGO--(BUSINESS WIRE)--Jun. 15, 2020-- Xeris Pharmaceuticals, Inc. (Nasdaq: XERS), a specialty pharmaceutical company leveraging its novel technology platforms to develop and commercialize ready-to-use injectable and infusible drug formulations, today announced positive topline results from the outpatient stage of a Phase 2 study of its developmental Gvoke RTU Micro™ for the prevention of hypoglycemia during and after moderate-to-high intensity aerobic exercise in adults with Type 1 diabetes mellitus (T1D) who use insulin pumps. The clinical data was presented at a late-breaking session at the American Diabetes Association being held as a virtual event on June 12-16, 2020.

In the outpatient stage of this study, subjects were randomly assigned to RTU Glucagon with 50% insulin pump reduction (RTU Glucagon + standard of care); placebo injection with 50% insulin pump reduction (standard of care); or RTU Glucagon without insulin pump reduction (Open Label RTU Glucagon). For persons with diabetes, standard of care for aerobic exercise includes 50% insulin pump reduction. Results show that pretreatment with 150 µg of RTU glucagon was adequate to maintain normal blood glucose levels during prolonged, moderate-to-intense aerobic exercise.

During the 12-week outpatient stage, 45 subjects completed 795 aerobic exercise sessions. Over this time when individually compared to standard of care alone, the number of EIH episodes was significantly less with RTU Glucagon + standard of care (8.5±1.17 episodes versus 2.5±1.26 episodes, P=0.0016), and with Open Label RTU Glucagon (8.5±1.17 episodes versus 3.9±1.37 episodes, P=0.0165). RTU Glucagon + standard of care resulted in an approximately 70% lower rate of EIH when compared to standard of care alone (12±14.1% versus 41±21.5% respectively, P<0.0001). Additionally, Open Label RTU Glucagon resulted in an approximately 54% lower rate of EIH when compared to standard of care alone (19±20.2% versus 41±21.5% respectively, P=0.0032). The difference in the incidence rates of EIH between the two RTU Glucagon arms was not statistically significant.

Across all outpatient stage exercise sessions, the nominal use of oral glucose tablets during and after exercise, in order to treat hypoglycemia, was greater in the standard of care arm compared to RTU Glucagon + standard of care and Open Label RTU Glucagon. Consequently, the nominal incidence of hyperglycemia episodes was observed to be greater in the standard of care arm when compared to RTU Glucagon + standard of care for blood glucose >180 mg/dL (2.4-fold). RTU Glucagon did not appear to individually contribute to hyperglycemia. When hyperglycemia events did occur, the time duration and severity of events did not differ between treatment arms.

The incidence and severity of adverse events was comparable across all treatment arms. Nausea, vomiting, and injection site discomfort were the most commonly reported adverse events. RTU glucagon was safe and well tolerated, and no serious adverse events occurred.

“This is the first study to demonstrate that pre-treatment before exercise with micro doses of glucagon with or without an adjustment to insulin reduces the risk for exercise induced hypoglycemia and therefore may potentially reduce the anxiety and the burden of hypoglycemia around exercise,” said Principal Investigator, Ronnie Aronson MD, FRCPC, FACE, Chief Medical Officer, LMC Diabetes and Endocrinology.

“Many people with diabetes do not achieve 2 ½ hours of aerobic exercise per week, despite recommendations from the ADA guidelines. There are many burdens to obtaining sufficient exercise, including multiple preparation steps such as insulin pump reduction well before exercise, and eating high glucose foods before, during, and after the exercise session,” said Paul R. Edick, Xeris’ Chairman and CEO. “The outpatient results of this study show that a micro dose (150 µg) of Gvoke RTU Micro, administered immediately prior to aggressive aerobic exercise, can alleviate this burden and significantly prevent exercise-induced hypoglycemia and its consequences. Hypoglycemia episodes require prompt intake of fast-acting carbohydrates that, if taken in excess, may cause detrimental hyperglycemia that is difficult to normalize. We believe that our Phase 2 study results indicate that we can help prevent exercise induced hypoglycemia, and in doing so may also help reduce the incidence of hyperglycemia.” Mr. Edick continued, “We anticipate an end-of-phase 2 meeting with the FDA later this year to discuss a clinical path forward for this program.”

“Physical activity is important for blood glucose management and overall cardiovascular and metabolic health in persons with diabetes. However, people with diabetes using insulin therapy often experience hypoglycemia during and/or after moderate-to-high intensity aerobic exercise even if their insulin delivery is reduced. Hypoglycemia, fear of hypoglycemia, and the preparations to avoid hypoglycemia remain significant barriers,” said Co-investigator Michael Riddell, PhD, Senior Scientist, LMC Diabetes and Endocrinology, Professor & Graduate Program Director, School of Kinesiology and Health Science, Faculty of Health, York University.

This study was a randomized, placebo-controlled, double-blind, two-treatment, two-period, crossover comparison in a clinical research center setting, followed by a randomized, placebo-controlled, two-treatment double-blind with a parallel open label, 3-arm comparison in an outpatient setting to evaluate the preliminary efficacy and safety of RTU glucagon to prevent exercise-induced hypoglycemia (EIH) in adults with T1D, who perform regular, moderate-to-high intensity aerobic exercise. For more information, visit www.clinicaltrials.gov Identifier: NCT03841526

About Exercise-Induced Hypoglycemia (EIH)

For persons with diabetes, especially with type 1 diabetes (T1D), the lack of pancreatic β-cell function leads to the requirement for exogenous insulin (introduced into the body by injection or infusion). Circulating levels of insulin consequently cannot be regulated endogenously and depend on the quantity and timing of insulin taken by the individual before exercise. Thus, insulin levels are often higher than they would be in the absence of diabetes, which has the result of limiting glucose production by the liver while stimulating glucose uptake by muscle, adipose, and liver cells for storage. As a result, blood glucose levels often decrease dramatically during physical activity for individuals with T1D unless carbohydrates are consumed before, during, and after exercise. This condition of low blood glucose with physical activity is known as Exercise-Induced Hypoglycemia (EIH).

About Glucagon

Glucagon is a metabolic hormone secreted by the pancreas that raises blood glucose levels by causing the liver to rapidly convert glycogen (the stored form of glucose) into glucose, which is then released into the bloodstream. Glucagon and insulin are two critical hormones in a glycemic control system that keep blood glucose at the right level in healthy individuals. In people with diabetes who are dependent on insulin, this control system is disrupted, and insulin must be injected to avoid high levels of blood glucose (hyperglycemia). The opposite effect, or low blood glucose (hypoglycemia), is also prevalent in this population due to dysregulated glucagon secretion. Severe hypoglycemia is a serious condition and can lead to seizures, coma, potential brain injury and, if untreated, death.

Glucagon is the standard of care for treating severe hypoglycemia. According to the American Diabetes Association, glucagon should be prescribed for all individuals at increased risk of clinically significant hypoglycemia, defined as blood glucose <54 mg/dL (3.0 mmol/L). Leveraging XeriSol™, one of Xeris' two proprietary formulation technology platforms, Xeris has the potential to provide the first ready-to-use, room-temperature stable liquid glucagon for use by people with diabetes and other conditions to prevent or manage various forms of hypoglycemia and improve glucose control.

About Xeris Pharmaceuticals, Inc.

Xeris (Nasdaq: XERS) is a specialty pharmaceutical company delivering innovative solutions to simplify the experience of administering important therapies that people rely on every day around the world. With a novel technology platform that enables ready-to-use, room-temperature stable formulations of injectable and infusible therapies, the company is advancing a portfolio of solutions in various therapeutic categories, including its first commercial product, Gvoke™. Its proprietary XeriSol™ and XeriJect™ formulation technologies have the potential to offer distinct advantages ove conventional product formulations, including eliminating the need for reconstitution, enabling long-term, room-temperature stability, significantly reducing injection volume, and eliminating the requirement for intravenous (IV) infusion. With Xeris' technology, new product formulations are designed to be easier to use by patients, caregivers, and health practitioners and help reduce costs for payers and the healthcare system.

Xeris is headquartered in Chicago, IL. For more information, visit www.xerispharma.com, or follow us on Twitter, LinkedIn or Instagram.

Forward-Looking Statements

Any statements in this press release about future expectations, plans and prospects for Xeris Pharmaceuticals, Inc., including statements regarding the acceptance of Gvoke™ in the marketplace, the market and therapeutic potential of its product candidates, expectations regarding clinical data, the timing or likelihood of regulatory approval and commercialization of its product candidates, the timing or likelihood of expansion into additional markets, expectations regarding the timing of the commercial launch of Gvoke HypoPen™, the potential utility of its formulation platforms and other statements containing the words "will," "would," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including, without limitation, the regulatory approval of its product candidates, its ability to market and sell its products, if approved, its reliance on a single source supplier for Gvoke HypoPen™ and other factors discussed in the "Risk Factors" section of the most recently filed Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission, as well as discussions of potential risks, uncertainties, and other important factors in Xeris' subsequent filings with the Securities and Exchange Commission. Any forward-looking statements contained in this press release speak only as of the date hereof, and Xeris expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

The Company intends to use the investor relations portion of its website as a means of disclosing material non-public information and for complying with disclosure obligations under Regulation FD.

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